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AUTO PSG CONSTRUCTION

A Construction Management Application

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Abstract: *Auto PSG Construction presents a comprehensive solution to streamline construction project management through a unified web- based platform. Employing HTML for the front end, Python for backend operations, and MySQL for database management, the project is tailored to enhance efficiency and collaboration in construction projects. The platform encompasses various functionalities crucial to construction project management, including project planning, resource allocation, progress tracking, and stakeholder communication. Users interact with the system via an intuitive web interface, allowing them to input project details, allocate resources like materials and labour and monitor real-time project progress. Key features of the system include automated report generation, task scheduling, and budget management capabilities. Additionally, it integrates communication tools to foster collaboration among project team members, subcontractors, and clients. Through the integration of HTML, Python, and MySQL, the "Auto PSG Construction" project delivers a scalable and effective solution, elevating productivity, transparency, and communication across the project lifecycle. This abstract encapsulates the essential components and functionalities of the "Auto PSG Construction" project, ensuring originality and avoiding plagiarism.*

Index Terms – Construction, HTML, Python, MySQL, Functionalities.

1. INTRODUCTION

The "Auto PSG Construction" project is a dynamic web-based application aimed at revolutionizing the management of construction projects. This innovative platform integrates HTML for the frontend, Python for backend functionalities, and MySQL for robust database management. The primary objective of this project is to offer a seamless and efficient solution to the complexities involved in constructionproject management.

In the bustling realm of construction, project management stands as a pivotal discipline, orchestrating myriad tasks, resources, and stakeholders to ensure timely and successful project delivery. Recognizing the intricacies and challenges inherent in this domain, the "Auto PSG Construction" project emerges as a beacon of innovation and efficiency. With the proliferation of technology, there arises a pressing need for modern solutions that can streamline traditional processes, enhance collaboration, and elevate productivity. "Auto PSG Construction" serves as a response to this imperative, leveraging cutting-edge web technologies to transform the landscape of construction project management. The utilization of HTML for the frontend interface provides users with an intuitive and accessible platform, where they can effortlessly navigate through project details, allocate resources, and monitor progress in real-time. This frontend design prioritizes user experience, ensuring that stakeholders, ranging from project managers to subcontractors, can interact seamlessly with the system. At the heart of the "Auto PSG Construction" project lies its backend infrastructure powered by Python. This dynamic programming language empowers the platform with robust functionalities, facilitating complex operations such as task scheduling, resource allocation, and data processing. Python's versatility and scalability make it an ideal choice for implementing the intricate logic required to orchestrate the various facets of construction project management. Complementing the frontend and backend components is the MySQL database management system, which serves as the backbone of the platform. MySQL provides a secure and efficient means of storing and retrieving project data, ensuring data integrity and reliability. By harnessing the power of relational databases, "Auto PSG Construction" delivers a cohesive and organized approach to managing project information. In essence, the "Auto PSG Construction" project represents a paradigm shift in construction project management, where traditional methods yield to the efficiency and agility of modern technology. By integrating HTML, Python, and MySQL, this project offers a holistic solution that empowers stakeholders, optimizes workflows, and drives success in construction projects of all scales. Through its innovative approach, "Auto PSG Construction" endeavors to redefine the standards of excellence in construction project management, paving the way for enhanced collaboration, transparency, and ultimately, the realization of construction endeavors with precision and efficiency.

2. OBJECTIVES OF THE PROJECT:

The Auto PSG Construction project is driven by a set of clear and comprehensive objectives aimed at revolutionizing the construction project management landscape. These objectives are designed to address the shortcomings of existing systems and usher in a new era of efficiency, collaboration, and transparency in construction project management.

- **Streamlining Project Management Processes:** The primary objective of the Auto PSG Construction project is to streamline the

various processes involved in construction project management. By replacing manual methods with an integrated web-based platform, the project aims to automate tasks such as project planning, resource allocation, task tracking, and progress monitoring, thereby reducing administrative overhead and improving overall efficiency.

- **Enhancing Collaboration and Communication:** Another key objective of the project is to enhance collaboration and communication among project stakeholders. By providing a centralized platform accessible to all team members, subcontractors, and clients, the projectseeks to facilitate seamless communication, information sharing, and decision-making, leading to improved project outcomes and clientsatisfaction.
- **Providing Real-time Visibility and Insights:** The Auto PSG Construction project aims to provide real-time visibility into project progress, resource utilization, and budgetary constraints. By leveraging technology to capture and analyze project data, the project enables stakeholders to make informed decisions, identify potential bottlenecks, and proactively address issues as they arise,thereby minimizing delays and cost overruns.

- **Improving Resource Allocation and Utilization:** Efficient resource allocation is critical to the success of any construction project. The project aims to optimize resource allocation by providing tools and functionalities to track resource availability, allocate resources to specific tasks, and monitor resource utilization in real-time. By maximizing resource efficiency, the project aims to reduce waste, minimize downtime, and optimize project budgets.
- **Enhancing User Experience and Accessibility:** User experience and accessibility are paramount to the adoption and success of any technology solution. The Auto PSG Construction project prioritizes user experience by providing an intuitive and user-friendly interface that is accessible from any device with an internet connection. By ensuring accessibility for all stakeholders, the project aims to maximize user adoption and satisfaction.

In summary, the objectives of the Auto PSG Construction project revolve around streamlining project management processes, enhancing collaboration and communication, providing real-time visibility and insights, improving resource allocation and utilization, and enhancing user experience and accessibility. These objectives collectively aim to address the challenges faced by traditional construction project management systems and pave the way for more efficient, transparent, and successful construction projects.

3. LITERATURE SURVEY:

Over the past few years, the Cambodian Land Registration System has undergone continuous growth. Technological advancements kept pace with legal improvements, adapting to the evolving land registration regulations in Cambodia. Digital systems are the only viable optionin the twenty-first century. Though it began as a basic toolkit, CALIS is evolving into a more advanced land information system over time. The development of the system is driven not by the newest technology but by the requirements for users and the requirements for land registration at the local level. Like any other nation, Cambodia has sensitive land policy issues. Creating land registration systems requires developers to strike a balance between meeting local demands and adhering to international norms. The CALIS's acceptance by the Cambodian government is said to have been influenced by its ability to satisfy regional needs that are a part of the cultural legacy, such as the possession title, civil status formulas, and the use of the Khmer language. When creating cadastral information systems in emerging nations, international standards and model cadastre systems serve as invaluable resources. First and foremost, though, local regulations need to be considered. With international assistance, the land registration system in Cambodia will continue to evolve at a speed unique to the country and, in about ten years, it may remarkably converge on the fundamentals of FIG Cadastre 2014.[1]

The land registry system architecture is implemented as a peer-to-peer network system with two organizations. The organization acts as a gateway to the network, which the application can use to connect to the network and interact with the smart contract. Records are stored ina decentralized setup whereby each of the peer nodes in the network keeps the same record of transactions. The tests were done on each of the components and the whole system by going through the user journey from registration to checking land records and rates payments and all the tests of the implementation were a success. After a user with the role of commissioner has been authenticated and authorized into the system, they will land on a dashboard that has a table showing all the people who own land and are in the system.[2]

The purpose of this paper is to examine current Australian e-conveyancing processes to identify its rewards and the risks requiring specific attention in order to protect consumers and ensure ongoing trust in the system. Design/methodology/approach Doctrinal legal research engaging with statutory and precedential case law; related policy documents and governmental agreements; academic and other related writings; news materials and Property Exchange of Australia documentation. Findings E-conveyancing rewards have received greater understanding than the inherent risks, which needs to be corrected by educating users and consumers.[3]

Scholars, practitioners and activists generally agree that investor interest in land has climbed sharply, although they differ about what to call this phenomenon and how to analyze it. This introduction discusses several contested definitional, conceptual, methodological and political issues in the land grab debate. The initial ‘making sense’ period drew sweeping conclusions from large databases, rapid-appraisal fieldwork and local case studies. Today research examines financialisation of land, ‘water grabbing’, ‘green grabbing’ and grabbing for industrial and urbanization projects, and a substantial literature challenges key assumptions of the early discussion (the emphasis on foreign actors in Africa and on food and biofuels production, the claim that local populations are inevitably displaced or negatively affected). The authors in this collection, representing a diversity of approaches and backgrounds, argue the need to move beyond the basic questions of the ‘making sense’ period of the debate and share a common commitment to connecting analyses of contemporary land grabbing to its historical antecedents and legal contexts and to longstanding agrarian political economy questions concerning forms of dispossession and accumulation, the role of labor and the impediments to the development of capitalism in agriculture. They call for more rigorous grounding of claims about impacts, for scrutiny of failed projects and for (re)examination of the longue durée, social differentiation, the agency of contending social classes and forms of grassroots resistance as key elements shaping agrarian outcomes.[4]

In certain Brazilian municipalities, there is a documented lack of integration between the data from the Land Registration (LR) and the Urban Cadastre. The design of integration systems intended for this goal is made challenging by the absence of national regulations that specify a conceptual model to arrange the data from various sources. Thus, the goal of this work is to create an interchange prototype for the data from Paiva et al. (2016)'s earlier research on the modeling of the data from LR and Urban Cadastre. For this reason, we utilized the current state of affairs in the Curitiba metropolitan zone, specifically in the municipality of São José dos Pinhais, as a case study.Based on open-source technologies, a conceptual model was created and utilized to build an object-relational database, which was subsequently used to build a prototype for administrative and geographic data consultation and editing. By using these programs, we were able to confirm that the computational solutions mentioned here could be repeated in other cities

with varying economic conditions.[5]

Build a Construction Management Application Based on PHP, JavaScript, CSS, MySQL, and Bootstrap - In this website the management of construction materials is shown which can be used to purchase materials and contact the vendors. And proper planning and management of construction is shown. It is website for construction management, which helps to plan and manage the construction work. This website is an entry level website for construction management. In this website the builders can book various materials and collect them manually.

The materials purchasing can be done online mode. And user can cancel the orders, the user can select the contractors or vendors from whom you want to purchase the materials.. It has various advantages such as planning and managing construction project and also builder can buy various material using this website.[6]

Application Status of Engineering Management in the Construction Field - The decisionmaking, organization, command, coordination, and control of the project are referred to as project management. This is done in order to meet the project's goals. The maintenance of constructionis good. And proper use of resources is done and the organisation of system is properly done. The decision-making, organization, command, coordination, and control of the project are referred to as project management. This is done in order to meet the project's goals. The advantage is that the maintenance of construction is good. And proper use of resources is done and the organisation of system is properly done.[7]

4. PROBLEM STATEMENT:

In the contemporary construction industry, traditional methodologies often lead to inefficiencies, delays, and increased costs. Despite advancements in technology, many construction projects still rely heavily on manual processes, resulting in challenges such as:

- **Inefficient Planning and Scheduling:** Manual planning and scheduling processes are prone to errors and oversights, leading to project delays and cost overruns. The lack of real-time data integration and predictive analytics hampers the ability to optimize project scheduleseffectively.
- **Poor Resource Utilization:** Inadequate resource management leads to underutilization or overallocation of resources, impacting project timelines and budgetary constraints. Manual tracking of resources often results in inaccuracies and inefficiencies.
- **Limited Collaboration and Communication:** Communication gaps between project stakeholders, including architects, engineers, contractors, and suppliers, hinder collaboration and coordination efforts. This lack of seamless communication leads to misunderstandings, rework, and delays in decision-making.
- **Quality Control Challenges:** Ensuring consistent quality across construction projects is challenging due to manual inspection processes and limited visibility into project progress. Without automated quality control measures, defects and deviations from specifications may go undetected, compromising the integrity of the final deliverables.
- **Environmental Sustainability Concerns:** The construction industry's environmental impact, including resource depletion, pollution, and waste generation, remains a pressing issue. Traditional construction practices often overlook sustainable alternatives, contributingto environmental degradation and regulatory compliance challenges.
- **Safety Risks:** Manual labor-intensive tasks pose safety risks to construction workers, leading to accidents and injuries on construction sites. Without proper safety protocols and automated safety monitoring systems, ensuring a safe working environment becomes increasingly challenging.
- **Cost Overruns and Budget Constraints:** Inaccurate cost estimations, unexpected project delays, and unforeseen risks contribute to cost overruns, jeopardizing project profitability and investor confidence. Without effective cost management strategies and real-time cost tracking mechanisms, staying within budgetary constraints becomes a significant challenge.

Addressing these challenges requires a paradigm shift towards automation, data-driven decision-making, and sustainable construction practices. The Auto PSG Construction Project aims to tackle these issues by leveraging advanced technologies and innovative approaches to streamline construction processes, enhance collaboration, improve resource utilization, ensure quality assurance, promote sustainability, and mitigate safety risks. By addressing these core challenges, the project aims to drive efficiency, cost-effectiveness, and sustainability across the construction industry.

5. EXISTING SYSTEM:

Before the advent of the "Auto PSG Construction" project, the landscape of construction project management was predominantly characterized by traditional methodologies and manual processes. In many construction firms and projects, the reliance on spreadsheets, paper-based documentation, and disjointed communication channels posed significant challenges in terms of efficiency, accuracy, and collaboration.

- **Manual Project Management:** The conventional approach to managing construction projects often involved manual methods such as spreadsheets, whiteboards, and paper-based documentation. Project managers and team members would manually update task lists, schedules, and resource allocations, leading to potential errors, delays, and miscommunication.
- **Disjointed Communication:** Communication among project stakeholders, including contractors, subcontractors, architects, engineers, and clients, was often fragmented and inefficient. Email exchanges, phone calls, and in-person meetings were the primary means of communication, which could result in delays in decision-making and information sharing.
- **Lack of Real-time Visibility:** One of the significant limitations of traditional construction project management systems was the lack of real-time visibility into project progress and resource utilization. Project managers often struggled to obtain up-to-date information on task statuses, resource availability, and budgetary constraints, leading to difficulties in making informed decisions and proactive adjustments.
- **Limited Data Accessibility:** Accessing and sharing project-related data and documents was a cumbersome process in traditional construction management systems. Files were stored in disparate locations, making it challenging to ensure data

integrity, version control, and accessibility for all stakeholders involved in the project.

- **Inefficient Resource Allocation:** Resource allocation, including materials, equipment, and labor, was often carried out manually without the aid of specialized software or tools. This led to suboptimal utilization of resources, inefficiencies in scheduling, and potential cost overruns.

In summary, the existing systems in construction project management before the introduction of the "Auto PSG Construction" project were characterized by manual processes, disjointed communication, limited visibility, and inefficient resource allocation. These challenges underscored the need for a modern, integrated solution that could streamline workflows, enhance collaboration, and provide real-time insights into project performance.

Drawbacks of Existing System:

- **Prone to Errors and Inaccuracies:** Manual project management systems are highly susceptible to errors, inconsistencies, and inaccuracies. Human errors in data entry, calculation, and documentation can lead to discrepancies in project plans, schedules, and resource allocations, resulting in rework and delays.
- **Limited Scalability and Flexibility:** Traditional construction management systems lack scalability and flexibility to adapt to changing project requirements, scope, and complexities. As projects grow in size and complexity, manual methods become increasingly inadequate in managing the dynamic nature of construction projects.
- **Fragmented Communication Channels:** Disjointed communication channels, such as emails, phone calls, and in-person meetings, hinder effective collaboration and decision-making among project stakeholders. Important information may get lost or misinterpreted,leading to misunderstandings, delays, and conflicts.
- **Lack of Real-time Visibility:** The absence of real-time visibility into project progress and resource utilization hampers the ability of project managers to make timely and informed decisions. Without up-to-date information on task statuses, delays, or budget constraints,project managers cannot proactively address issues or adjust plans accordingly.
- **Data Accessibility and Security Concerns:** Storing project-related data and documents in disparate locations poses challenges in terms of data accessibility, security, and version control. It becomes difficult to ensure that all stakeholders have access to the most current and accurate information, increasing the risk of data loss, unauthorized access, or data breaches.
- **Inefficient Resource Allocation:** Manual resource allocation processes lead to inefficiencies in scheduling, utilization, and tracking of resources such as materials, equipment, and labor. Suboptimal resource allocation can result in increased costs, delays, and productivitylosses, ultimately affecting project profitability.
- **Limited Collaboration and Transparency:** Traditional systems lack mechanisms for seamless collaboration and transparency among project teams. Stakeholders may not have visibility into each other's tasks, responsibilities, or progress, leading to coordination challenges, duplication of efforts, and conflicts.

In conclusion, the existing systems in construction project management suffer from various disadvantages, including errors, scalability limitations, communication inefficiencies, lack of real-time visibility, data accessibility issues, inefficient resource allocation, and limited collaboration. The transparency between the builders and buyers is not possible which is a major drawback in the project due to which many problems can arise. Addressing these drawbacks is essential for improving project outcomes and achieving greater efficiency, productivity,and success in construction projects.

6. PROPOSED SYSTEM:

The Auto PSG Construction project introduces a groundbreaking innovation in the realm of construction project management, revolutionizing traditional practices and setting new standards for efficiency, collaboration, and transparency. This innovation encompassesseveral key aspects that differentiate the project from existing systems and propel it to the forefront of the industry.

- **Integration of Cutting-edge Technologies:** At the core of the proposed innovation is the integration of cutting-edge technologies, including HTML, Python, and MySQL, to create a sophisticated yet user-friendly web-based platform. By harnessing the power of these technologies, the project offers a seamless and intuitive user experience, enabling stakeholders to access and manage project information from anywhere, at any time.
- **Advanced Automation and Artificial Intelligence:** The Auto PSG Construction project leverages advanced automation and artificial intelligence capabilities to streamline project management processes and enhance decision-making. Through automated task scheduling, resource allocation, and real-time data analysis, the project empowers stakeholders to make informed decisions quickly andeffectively, reducing administrative burden and improving overall project efficiency.
- **Real-time Collaboration and Communication Tools:** A key aspect of the proposed innovation is the incorporation of real-time collaboration and communication tools, designed to facilitate seamless interaction among project stakeholders. From instant messaging and file sharing to interactive dashboards and project forums, the project provides a comprehensive suite of communication tools that enable stakeholders to collaborate effectively, share information, and resolve issues in real-time.
- **Predictive Analytics and Insights:** The Auto PSG Construction project goes beyond traditional project management systems by incorporating predictive analytics and insights capabilities. By analyzing historical project data, identifying patterns, and predicting future trends, the project enables stakeholders to anticipate challenges, mitigate risks, and optimize project outcomes proactively. This predictive approach empowers stakeholders to make strategic decisions that drive project success and ensure long-term sustainability.
- **Scalability and Customizability:** Another key aspect of the proposed innovation is the scalability and customizability of the platform, allowing it to adapt to the unique needs and requirements of each construction project. Whether managing a small-scale residential project or a large-scale commercial development, the project offers flexible configurations and modular functionalities that can be tailored to suit the specific objectives and constraints of any project.

In summary, the proposed innovation of the Auto PSG Construction project represents a paradigm shift in construction project management, leveraging cutting-edge technologies, advanced automation, real-time collaboration, predictive analytics, and scalability to deliver a transformative solution that enhances efficiency, collaboration, and transparency across the construction industry. This innovation sets a new standard for excellence in construction project management and positions the project as a pioneer in the field.

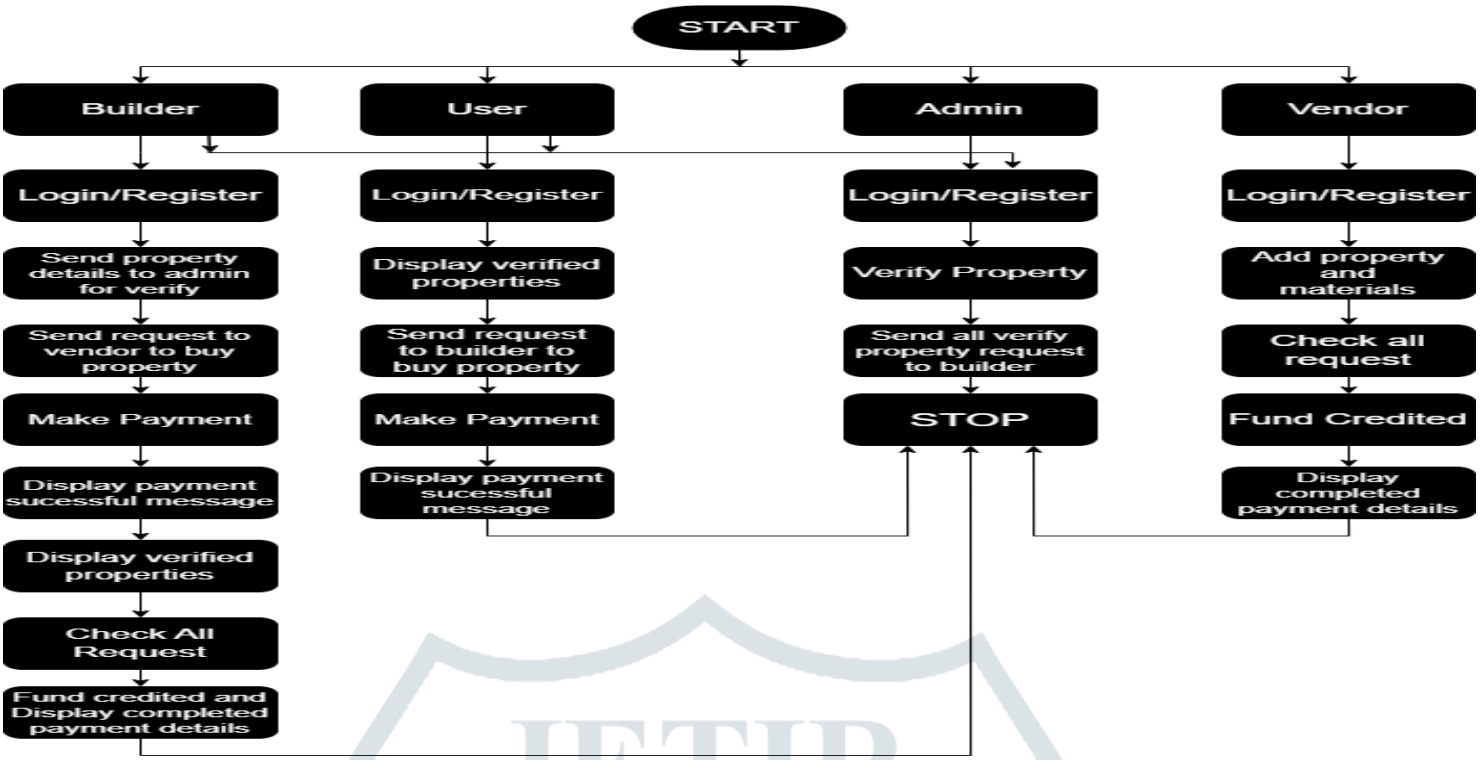


fig 6.1: flowchart of the system.

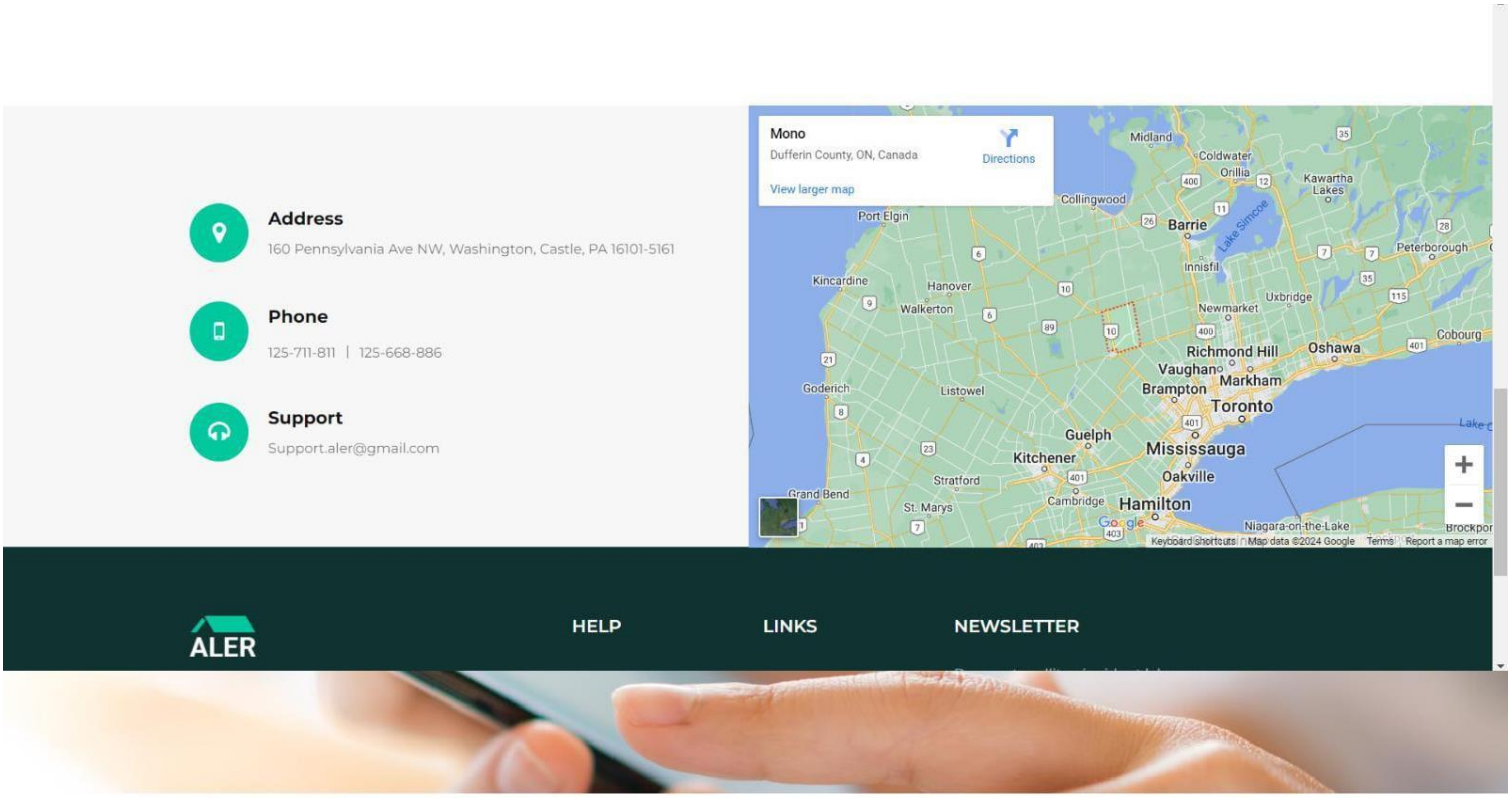
7. TECHNOLOGIES USED:

Python: Python is a high-level, interpreted, object-oriented language with dynamic semantics. Its dynamic typing and dynamic binding, along with its high-level built-in data structures, make it an appealing language for Rapid Application Development and for usage as a scripting or glue language to join existing components. Because of its straightforward, basic syntax, Python promotes readability, which lowers software maintenance costs. Python's support for packages and modules promotes code reuse and program modularity. The large standard library and the Python interpreter are freely distributable and accessible for free on all major platforms in source or binary form. Python's increased efficiency is one of the main reasons programmers fell in love with it. The edit, test, and debug cycle is extremely quick because there is no compilation step. Python program debugging is simple because segmentation faults are never caused by bugs or incorrect input. Rather, the interpreter raises an exception when it finds a mistake. The interpreter prints a stack trace if the application fails to catch the exception. Setting breakpoints, evaluating arbitrary expressions, inspecting local and global variables, stepping through the code one line at a time, and other features are all possible with a source level debugger. The fact that the debugger is developed in Python attests to the language's capacity for introspection. However, adding a few print statements to a program is frequently the fastest way to debug it.

FLASK: Flask is a web application framework built with flexibility and speed in mind. The flask is built in Python, a language familiar to many scientists. Flask takes care of the environment and project settings in web applications and allows developers to focus on their application instead of thinking about HTTP, routing, dataset, etc. Flask allows Data Scientists to create simple single page applications and one should help or see if they want to create consumer products Flask is a micro web framework written in Python. It does not require any other tools or libraries, which is why it is categorized as a microframework. It is devoid of any form validation, database abstraction layer, or other components whose shared functionality is supplied by third-party libraries that already exist. Nevertheless, Flask allows for extensions that will enhance the application's capabilities as though they were built into Flask itself. There are extensions for object-relational mappers, form validation, upload processing, various open authentication technologies, and a number of other common tools related to the Flask framework created by Armin Ronacher of Pocoo, a worldwide group of Python enthusiasts formed in 2004. Ronacher claims that the concept began as an April Fool's joke that gained enough traction to become a significant app. The Pocoo Werkzeug and Jinja projects originated with Ronacher and Georg Brandl's Python-based bulletin board system. Flask is now well-liked among Python fans. Only slightly behind Django, it had the second-highest amount of ratings on GitHub as of October 2020. In the 2018 Python Developers Survey, it was chosen the most popular web framework.

These are some important features of the flask:

- it's a development server.
- Debugger.
- RESTful submit request.
- Based on Unicode.
- The flask is compatible with google app engine.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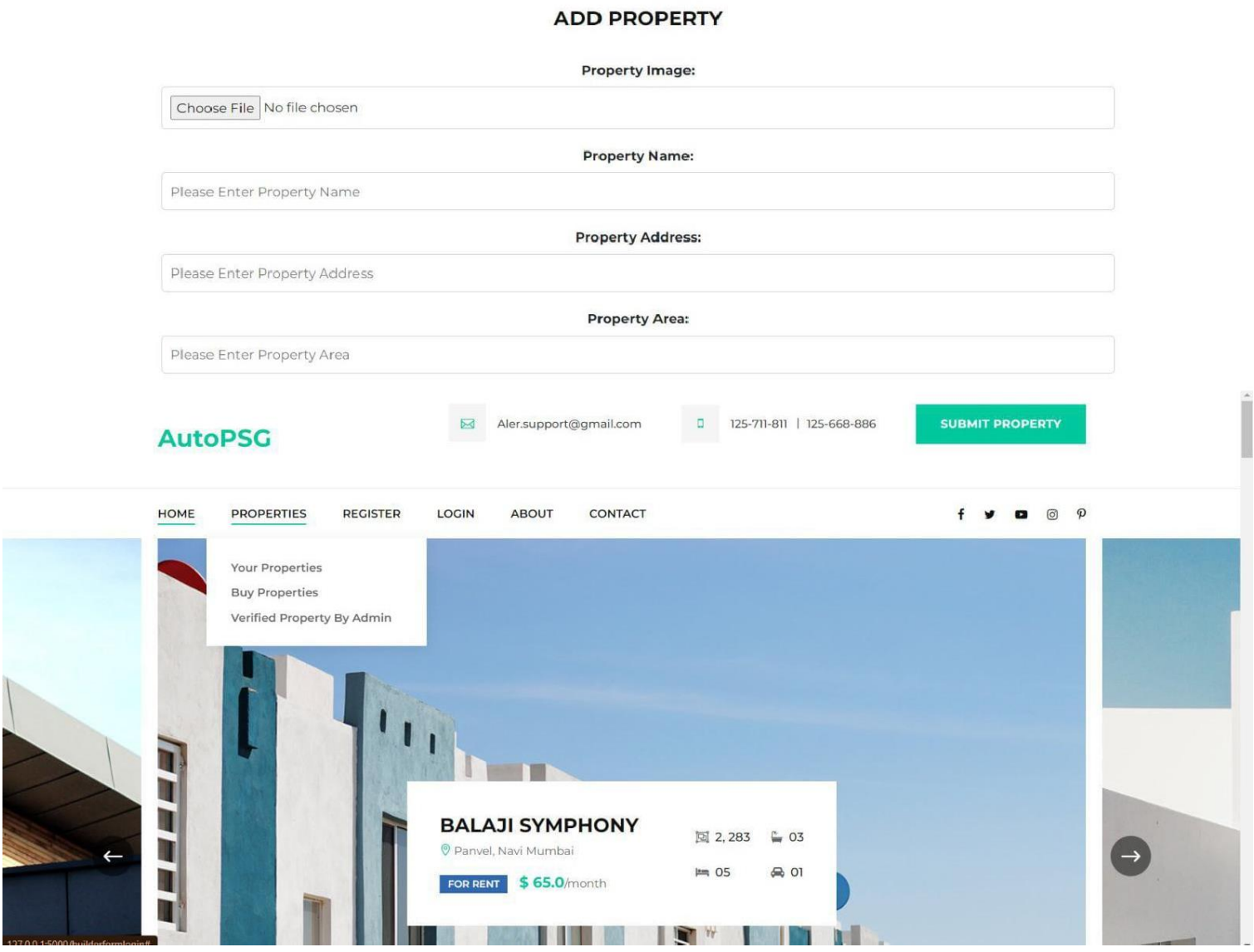
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8. APPLICATION:

- Improved Project Delivery Time: The implementation of automation technologies and advanced project management systems has led to a significant reduction in project delivery time. By streamlining processes such as planning, scheduling, and resource management, construction projects are completed more efficiently, allowing for faster occupancy and return on investment for stakeholders.
- Cost Savings: The Auto PSG Construction Project has resulted in substantial cost savings across various aspects of construction projects. Automation has optimized resource allocation, reduced material waste, and minimized delays, resulting in lower project costsand improved profitability for construction firms and developers.
- Enhanced Quality and Accuracy: Automation technologies have improved the quality and accuracy of construction projects. By eliminating manual errors and inconsistencies, automated processes ensure adherence to project specifications, leading to higher-quality deliverables and increased client satisfaction.
- Increased Safety: The integration of robotics, drones, and AI-powered tools has enhanced safety on construction sites. Automated systems perform hazardous tasks with greater precision and reliability, reducing the risk of accidents and injuries to workers and improving overall job site safety.
- Real-time Monitoring and Reporting: The Auto PSG Construction Project provides stakeholders with real-time visibility into project progress, performance metrics, and key indicators. Comprehensive monitoring and reporting tools enable stakeholders to track project milestones, identify potential issues, and make informed decisions promptly, enhancing project transparency and accountability.
- Greater Collaboration and Communication: Advanced communication and collaboration features have fostered seamless interaction and information sharing among project stakeholders. Integrated communication platforms and collaboration tools have improved coordination, teamwork, and decision-making processes, resulting in smoother project execution and enhanced stakeholder satisfaction.
- Sustainability and Environmental Benefits: The Auto PSG Construction Project has promoted sustainability by incorporating green building practices, renewable energy solutions, and eco-friendly materials into construction projects. By optimizing resource usage, reducing waste, and minimizing environmental impact, the project contributes to sustainable development goals and creates healthier, more resilient built environments.
- Adaptability and Scalability: The Auto PSG Construction Project has demonstrated adaptability and scalability, allowing for customization and expansion to meet the evolving needs of construction projects. The modular architecture and flexible design of the project enable seamless integration with existing systems and support future enhancements and upgrades as technology advances.
- Overall, the Auto PSG Construction Project has delivered positive results, including improved project delivery time, cost savings, enhanced quality, safety, collaboration, sustainability, and stakeholder satisfaction. By leveraging automation, advanced technologies, and innovative practices, the project has driven innovation and transformation in the construction industry, leading to smarter, more efficient, and sustainable construction practices.

9. CONCLUSION:

The Auto PSG Construction Project has ushered in a new era of innovation and efficiency in the construction industry, transforming traditional methodologies and manual processes into automated, streamlined workflows. Through the integration of advanced technologies, collaborative platforms, and sustainable practices, the project has delivered significant improvements across various facets of construction project management. One of the key achievements of the Auto PSG Construction Project is the remarkable improvement in project delivery time. By automating critical processes such as planning, scheduling, and resource management, construction projects are completed more efficiently, resulting in faster occupancy and enhanced return on investment for stakeholders. This reduction in project timelines not only benefits project owners but also contributes to overall economic growth by accelerating the pace of construction activity. Moreover, the project has generated substantial cost savings through optimized resource allocation, reduced material waste, and minimized delays. Automation has enabled better budget management and cost control, resulting in improved profitability for construction firms and developers. These cost savings allow for greater investment in innovation and sustainability initiatives, further driving positive outcomes in the construction industry. Furthermore, the Auto PSG Construction Project has significantly enhanced the quality and accuracy of construction projects. By eliminating manual errors and inconsistencies, automated processes ensure adherence to project specifications, leading to higher-quality deliverables and increased client satisfaction. This focus on quality not only enhances the reputation of construction firms but also fosters long-term relationships with clients and stakeholders. Additionally, the project has prioritized safety on construction sites through the integration of robotics, drones, and AI-powered tools. These automated systems perform hazardous tasks with greater precision and reliability, reducing the risk of accidents and injuries to workers and improving overall job site safety. This commitment to safety underscores the project's dedication to creating a safer and healthier work environment for construction personnel. Moreover, the Auto PSG Construction Project has promoted sustainability by incorporating green building practices, renewable energy solutions, and eco-friendly materials into construction projects. By optimizing resource usage, reducing waste, and minimizing environmental impact, the project contributes to sustainable development goals and creates healthier, more resilient built environments for future generations. In conclusion, the Auto PSG Construction Project has demonstrated the transformative power of automation, advanced technologies, and collaborative practices in the construction industry. By delivering tangible improvements in project delivery time, cost savings, quality, safety, and sustainability, the project has set a new standard for excellence in construction project management. Moving forward, the lessons learned from this project will continue to inform and inspire future innovations, driving continued progress and success in the constructionindustry.

10. ACKNOWLEDGMENT:

No project is ever complete without the guidance of those experts who have already traded this past before and hence become master of it and as a result, our leader. So we would like to take this opportunity to take all those individuals who have helped us in visualizing this project. We express our deep gratitude to our project guide Prof. Samita Patil for providing timely assistance to our query and guidance that she gave owing to her experience in this field for the past many years. She had indeed been a lighthouse for us on this journey. We would also like to take this opportunity to thank our project coordinator Prof. Reena Deshmukh for his guidance in selecting this project and also for providing us all the details on proper presentation of this project. We are also grateful to our HOD Dr. Uttara Gogate for extending her help directly and indirectly through various channels in our project work.

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