

SCHOOL OF ADVANCED TECHNOLOGIES, ENGINEERING, AND SCIENCE

(SATES)

**PROJECT PROPOSAL SUBMITTED TO THE ACCRA INSTITUTE OF TECHNOLOGY IN PARTIAL FULFILLMENT OF THE REQUIREMENT OF THE DEGREE IN COMPUTER ENGINEERING**

BY

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**The Research Topic**

ESSENTIAL SERVICE PROVIDER PERMIT SYSTEM (ELECTRONIC PAYMENT AND APPLICATION SYSTEM OF SCHOLARSHIPS)

**Introduction**

The Essential Service Provider Permit System is a mechanism put in place by authorities to govern and oversee the provision of vital services during emergencies or times of crisis. It strives to ensure that key services required for society's well-being and functioning continue to operate smoothly, despite difficult conditions. Certain services are regarded as important to maintain public health, safety, and basic requirements during catastrophes such as natural disasters, pandemics, or other conditions that may disrupt regular activity. Healthcare institutions, emergency services, utilities (such as power, water, and telecommunications), law enforcement, food production and distribution, transportation, and critical government duties are examples of these services.

The Essential Service Provider Permit System establishes a process through which organizations and individuals involved in providing essential services can obtain passes to continue their operations during a crisis. The permits may be issued by government agencies or local authorities responsible for emergency management.

The Essential Service Provider Permit System is crucial for maintaining critical services and infrastructure during emergencies. It helps prevent disruptions, ensures the well-being of the population, and enables effective coordination among various service providers and government agencies. The specific details and procedures of the permit system may vary depending on the jurisdiction and the nature of the crisis.

**Field and Subject Area of Study**

The Field of study for this research is Computer Engineering and the subject area of focus is E-pass web Application development.

**Specific Objectives**

The specific objectives of building an Essential Service Provider Permit System may vary depending on the context and purpose of the system. However, here are the objectives this system aims to achieve:

* Streamlining permit issuance: The system aims to establish a streamlined and efficient process for issuing permits to essential service providers. It helps in reducing administrative burdens, minimizing delays, and ensuring that permits are granted promptly to authorized organizations.
* Emergency preparedness and response: The system will contribute to effective emergency preparedness by maintaining an up-to-date database of essential service providers. It enables rapid mobilization and coordination of resources during emergencies, ensuring a swift response to critical situations.
* Risk management and contingency planning: The system will assist in assessing potential risks to essential services and developing contingency plans to mitigate disruptions. It helps in identifying vulnerabilities, establishing alternative arrangements, and enhancing resilience in the face of emergencies or unforeseen events.
* Public awareness and transparency: The system will promote transparency and public awareness regarding the status and operations of essential service providers. It helps in conveying information to the public about the availability of essential services, any restrictions or guidelines in place, and how to access these services during times of crisis.

An Essential Service Provider Permit System that achieves these goals can help to ensure the continuation of vital services, improve emergency preparedness, and ensure effective response and recovery during crises or unusual events.

**The Research Problem Statement**

The Problem Setting

The implementation of an Essential Service Provider Permit System is typically prompted by various problems or circumstances that require stricter control and regulation of essential services during a crisis or emergency situation.

During a widespread public health crisis, such as a pandemic or outbreak of a contagious disease, it becomes necessary to limit the movement of individuals to curb the spread of the disease. Essential Service Provider Permit Systems help in identifying and allowing only essential workers to continue their work, reducing the risk of transmission. In the aftermath of a natural disaster like earthquakes, hurricanes, or floods, certain critical services need to be maintained to support recovery efforts and ensure the well-being of affected communities. An Essential Service Provider Permit System helps in identifying and authorizing personnel involved in emergency response, healthcare, utilities, transportation, and other essential services. In times of heightened security threats, such as terrorist activities or civil unrest, it may be necessary to restrict access to certain areas or implement increased security measures. An Essential Service Provider Permit System can help identify individuals who have legitimate reasons to access restricted areas or continue providing essential services despite the security situation. During situations where essential resources like food, water, or energy are scarce, it becomes crucial to manage their distribution effectively. An Essential Service Provider Permit System can assist in controlling the movement of individuals involved in the production, transportation, and distribution of these resources, ensuring equitable access and preventing hoarding or black-market activities. During times of national emergency, such as war, large-scale accidents, or other critical events, the government may need to exercise centralized control over essential services to ensure their continuity and effective management. An Essential Service Provider Permit System enables the government to identify and authorize personnel required for maintaining vital services and infrastructure.

Overall, the implementation of an Essential Service Provider Permit System aims to strike a balance between restricting non-essential movement and ensuring the continued provision of critical services during challenging circumstances.

Prior Studies / Works

The essential service provider permit system is a topic that has been studied extensively. Researchers and experts have conducted various studies to examine the effectiveness, challenges, and implications of implementing such a system. These studies have provided valuable insights into the importance of essential services during emergencies or crises and the role of permits in managing and regulating their operations.

One area of study focuses on the identification and categorization of essential services. Researchers have examined different sectors and industries to determine which services are critical for the functioning of society. This analysis helps in designing a comprehensive permit system that covers essential service providers across various sectors such as healthcare, transportation, energy, telecommunications, and public safety. Another aspect that has been explored is the process of obtaining permits. Studies have examined the procedures, criteria, and documentation required for essential service providers to acquire permits. The aim is to strike a balance between ensuring the smooth operation of critical services and maintaining appropriate checks and balances to prevent misuse or abuse of the permit system. Researchers have also investigated the challenges associated with implementing an essential service provider permit system. These challenges may include administrative burdens, delays in permit issuance, potential conflicts between different stakeholders, and the need for coordination among multiple government agencies. Understanding these challenges is crucial for policymakers and authorities to address them effectively and ensure the system's efficient functioning. Additionally, studies have examined the legal and regulatory frameworks surrounding essential service provider permits. Researchers have analyzed existing laws and regulations to identify gaps and propose necessary amendments or additions. This research helps in establishing a robust legal framework that clarifies the rights, responsibilities, and obligations of both essential service providers and authorities overseeing the permit system. Furthermore, the impact and effectiveness of essential service provider permit systems have been evaluated. Researchers have assessed the role of permits in ensuring the continuity of critical services during emergencies, improving coordination among service providers, and enhancing the overall resilience of infrastructure and society. These studies provide valuable insights for policymakers and authorities in refining and optimizing the permit system to maximize its benefits.

The Focus of the Study

**Curfews**: During a curfew, which typically involves restricted movement during specific hours of the day or night, only individuals engaged in essential activities are allowed to be outside their homes. Essential service providers, such as healthcare workers, emergency personnel, law enforcement officers, and utility workers, are granted permits or passes that allow them to travel and continue their work during the curfew hours.

The essential service provider permit system ensures that critical services can still be provided even during the curfew period. These permits help identify and authorize individuals who are necessary for maintaining public safety, health, and essential infrastructure. It helps prevent disruptions in essential services and ensures that key personnel can carry out their duties during restricted hours.

**Lockdowns**: Lockdowns involve more comprehensive restrictions on movement and the closure of non-essential businesses and services. Essential service providers play a crucial role in these situations as they are responsible for delivering vital services to the public. The essential service provider permit system is employed to identify and allow these providers to operate despite the general restrictions imposed by the lockdown. Permits or passes are issued to essential service providers, allowing them to continue their operations and travel to their workplaces during the lockdown. This helps ensure that critical sectors, such as healthcare, food supply, public transportation, utilities, and emergency services, can function without interruption. By regulating and permitting essential service providers, authorities can strike a balance between limiting non-essential activities and maintaining essential services for the well-being of the population.

The essential service provider permit system is closely tied to curfews and lockdowns. It enables authorities to identify and authorize individuals engaged in essential activities, allowing them to continue their work and provide crucial services during periods of restricted movement or comprehensive lockdowns.

**Methodology**

The development methodology to be used in developing this system is the Agile Methodology. Agile methodology is an approach to project management and software development that emphasizes flexibility, collaboration, and iterative progress. It focuses on breaking down large projects into smaller, manageable tasks and encourages frequent communication and adaptation throughout the project's lifecycle. The agile methodology also promotes transparency and visibility. Progress is tracked through regular meetings, such as daily stand-ups, where team members share updates and discuss any challenges they're facing. This helps the team stay informed and identify and address issues early on.

**Background and the Justification of Study**

Ensure that key services are available at all times during times of crisis or emergency, such as natural disasters, pandemics, or civil unrest. Governments and organizations all over the world have realized the need of identifying and regulating vital service providers in order to keep critical services running and support public welfare. Essential service providers are organizations or persons who are in charge of providing crucial services that are required for society to function. These services typically include healthcare, law enforcement, emergency response, utilities (water, electricity, gas), transportation, food supply, communication, and others deemed essential. During emergencies, essential service providers play a vital role in safeguarding public health, maintaining law and order, ensuring the availability of basic necessities, and facilitating communication and transportation. Their uninterrupted operation is crucial for minimizing disruptions and enabling effective crisis management.

Challenges Faced During Emergencies:

* Identifying and Prioritizing Essential Service Providers: In times of crisis, it becomes essential to identify and prioritize key service providers to ensure their unimpeded operation. Without a well-defined system, it can be challenging to determine which organizations or individuals should be granted permits to continue operating during a crisis.
* Balancing Public Safety and Service Provision: During emergencies, the safety and well-being of the public must be protected. However, there is a need to strike a balance between implementing necessary restrictions and ensuring essential services are still available. An efficient permit system can aid in managing this delicate balance.
* Controlling and Mitigating the Spread of the Crisis: By regulating essential service providers, authorities can establish protocols and guidelines to control the spread of the crisis. For example, healthcare providers can be monitored to ensure they are adhering to infection control measures, reducing the risk of further transmission.

Implementing an Essential Service Provider Permit System can dramatically improve overall emergency readiness and response capabilities. Authorities can build comprehensive plans and distribute resources more efficiently if important service providers are identified in advance. During a crisis, it is critical to ensure the continuance of important services. A permit system can help important services run smoothly, preventing disruptions that could jeopardize public safety or worsen the crisis's impact. Using permits to regulate vital service providers allows authorities to enforce safety measures, ensure compliance with health rules, and limit possible hazards to public health. This measure is particularly important during pandemics and other public health catastrophes. During an emergency, an established permission system gives a clear framework for decision-making. It allows authorities to quickly identify and authorize critical service providers, reducing uncertainty and allowing for more efficient resource allocation and coordination activities. A permit system can assist reduce the negative social and economic repercussions of crises by prioritizing and regulating critical services. It guarantees that vital sectors such as healthcare, utilities, and transportation continue to operate, hence sustaining individual well-being and societal stability.

The implementation of an Essential Service Provider Permit System offers numerous benefits in terms of enhancing preparedness, ensuring continuity of critical services, safeguarding public health, streamlining decision-making, and minimizing disruptions during emergencies.

**Expected Outcome of the Research**

The expected outcome of an Essential Service Provider Permit system is to effectively manage and regulate the provision of essential services during emergencies or critical situations. The main goal is to ensure the smooth operation of crucial services that are essential for public health, safety, and welfare.

**The Research Implementation Schedule**

The research work would follow the timeline as provided below: -

* The first chapter will be done in a month
* The second chapter would be developed in a month
* The third chapter would be developed in a month
* The fourth chapter would be done in a month
* The fifth chapter would be completed in a month.