**Project Charter**

* **Official project name:** Parking System.
* **Project Sponsor:** Stakeholders of Sheikh Zayed City.
* **Project manager:** Maria Ayman
* **Purpose of the project:** To solve a problem of finding empty parking space in the city, to save time of parking and to minimize the arguments…
* **Business Case:**
* The increasing influx of automobiles may be accommodated, through both the construction of roads and the creation of enough parking spaces. The challenge of parking is particularly important, as most people prefer private car ownership, something that is deeply ingrained in the daily routines of many of us. For this reason, the search for a parking spot in busy towns and cities is a daunting endeavor, leading to time wastage and unwarranted consumption of fuel, and, importantly, contributing to climate change. The issue of parking is significant to the point that it has been raised in discussions of climate change mitigation as well as in political arenas. In the new era, where technology has been accepted as one of the most critical tools for solving some of the challenges faced in the 21st century, especially in urban areas, the issue of parking has not been left behind. With the adoption of the Smart City model in most urban areas, smart digital solutions have emerged. Among them is the smart parking system, may be instrumental in bringing order and sanity to parking lots. According to them, the smart parking system could be customized to combine both technology and human innovations in order to optimize the utilization of scarce resources such as fuel, time, and space.
* Sheikh Zayed City management has invested in deploying sensors system for motorists to guide them to e-parking spots. A total of 600 wireless parking sensors were deployed on the streets. The embedded aspects were placed underneath the asphalt, and the sensors were then used to identify the available parking spaces and notify the motorists. The program was intended to cut down on emissions and congestion by providing motorists real time direction on the availability and location of open parking spaces. Access to sensor data was conducted through the proprietary application programming interface (API) of varying technology vendors operating in the smart parking space (Barcelona 2014).
* **Key deliverables:**
* Parking system is a mobile application that will work on both Android and IOS.
* **Project milestones:**

1. **Planning:(January 2022: [1/1: 30/1])**

* Meet with sponsors and clients to discuss Initial form issues and determine basic categories and subjects with project team and buying materials.

1. **Hardware and Software design review:(from January to May 2022: [31/1: 24/5])**

* Detailed designs fully implement the system architecture, are approved and are suitable for input into the development of code.

1. **System test review:( from May to June 2022: [25/5: 7/6])**

* The software product has passed system testing and is suitable for input into acceptance testing.

1. **Product operational: (June 2022: [7/6: 21/6] )**

* The software is in use in its target operational environment.
* **Project resources:**
* Staff: 3 android developers, 2 IOS developers, 1 back end developer, civil engineer and electric engineer.
* Hardware: 8 laptops and 2 servers.
* Software: Software licenses (Editors: Phpstorm).
* **Budget:**
* Budget allocated for this project is 1000000$.
* **Constraints:**
* This project must be delivered within the specified budget.
* This project must be delivered on 7/7/2022.
* Any laptops or computers needed must be bought from HP Company.
* **High-level risks:**
* Inaccurate estimates.
* Scope creep: uncontrolled changes and continuous growth of the scope or scope is ill defined.
* **Project team misunderstands requirements.**
* Manpower shortage.
* Customer will not accept the software as delivered even though it meets all specifications.
* Selected technology is poor matching to the problem or customer.
* Project key success criteria not clearly defined to verify the successful completion of each project phase.
* Projects within the program often need the same resources at the same time.
* Do not have the approval to make it in the city to avoid destroying the public neighborhoods.