System Analysis

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System Analysis

**Part 1**

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| **i) type of the system** | **ii) its purpose** | **iii) typical user(s) of the system and their means of interacting with it** | **iv) input data used by the system** | **v) system’s output** |
| (b) Management information systems—for Feelin’Chicken, a chain of fast-food restaurants | Keep track of the sales of the products as well as of the entire chain. Records could include sales data, purchase data, employee data, etc | The cash counter staff enters the transaction details through the computer which are recorded.  The management staff enters details for the employees and organizations through an interface provided. | Products purchased  Products sold  Employee personal information  Organizational information | Update of the database regarding the data that is stored e.g quantity of the products remaining, etc |
| (d) Expert systems—for FreeMoney, which provides services for budgeting, debt consolidation, and retirement savings | The expert system can be used to provide the best possible option regarding the services that the client should avail | Typical users can either be the office staff or it could be available for everyone through online service. The required data is inserted using the computer through a form containing the necessary details to be recorded. | The account details.  Personal details  Bank details  Work history | Output is the calculation that the system performs according to the selection that has been made by the client. It could be budget calculation, debt handling, etc. |
| (g) Customer relationship management system—for FindMe, a line of products that help track inventory and assets with RFID, and Bluetooth technology | The syste would be able to store the data regarding the systems that have been installed at various locations. Through this the customers would be easily tracked. | The data is inserted by the office staff of the company for each system that is installed by them. | Customer details  Order details | Output of the system is in the form of tracking details of a particular client. It could include what system has been installed, any complaints, updates installed ,etc |

# Part 2

# Mission Statement

VolunteerFit is a system that is designed to match potential volunteers with organizations that require their assistance. The VolunteerFit would be a mobile-based app that would keep the profiles of both organizations and potential volunteers. An organization may be able to locate the necessary volunteers as well as the other way around. The app would employ simple design and ease of use for the users. With the use of GPS systems, the organizations and volunteers would be able to locate as well as communicate with one another (Renfro et al., 2017).

**Functional Requirements**

## The VolunteerFit system shall have the following functional requirements

* The users whether organization or volunteers would be able to make their profile using a registration form.
* The organization would include details about their requirements, whether of human capital or items.
* The volunteers would include the details about their availability and the items that they would like to donate.
* The initial setup can be done using the social media profiles for the user.
* A notification shall be sent to both the volunteer and the organization in case of a match between them.
* The volunteer and organization can view the potential options in the areas close by.
* The organization and volunteers would be able to view the other on a GPS.
* Both the users i.e. the volunteers and the organization would be given the opportunity to provide feedback regarding the other through a feedback form.
* The volunteers and the organization can communicate with each other through an internal messaging system.
* If the volunteer wants to donate money that can be done through the use of online payment gateways and credit/debit cards.

**System-Level Use Cases**

* The user opens the VolunteerFit application.
* The app gives the option to log in or make a new account.
* The volunteer enters the credentials.
* The volunteer’s control panel is displayed.
* The volunteer enters the detail of the services/items that they are willing to provide.
* The volunteer can check the match that his requirements have with the particular organizations.
* In case a match occurs the system notifies the volunteer about that organization.
  + The location of the organization
  + The contact details of the organization
  + The time to set the meeting for the necessary process
* The volunteer sends details about the services/items that they are willing to provide to the organization.
* The volunteer waits for the response of the organization and further details.
* In case volunteers and the organization accept the offers, the delivery is made by the volunteer if items are required otherwise the volunteer proceeds to go to the location if volunteering services are requested.

**System-Level Constraints**

The system-level constraints for the VolunteerFit application are as follows

* The application would work with the devices running on android and ios operating systems.
* The app shall work on ios version 11 or higher.
* The app shall work on android version 6.0 or higher.
* The app shall be integrated with the GPS system to track the distance of the volunteers or the organization.
* The app shall have login compatibility with Facebook and Google only.
* The GPS used would be based on either Google Maps or Bing maps.
* The app would require the use of the internet to keep track of all the necessary details.
* The online transfer would be compatible with PayPal or credit/debit cards.

**References**

Renfro, B., Rosenquest, J., Terry, A., & Boeker, N. (2017). An analysis of global positioning system (GPS) standard positioning system (SPS) performance for 2015. *Space and Geophysics Laboratory. Applied Research Laboratories. The University of Texas at Austin*.