

American International University-Bangladesh (AIUB)  
**Department of Computer Science  
Faculty of Science & Technology (FST)  
Spring 20\_21**

**Section: C  
Group No: 7**

**Parental Security**

A software Engineering project submitted

By

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| SN | Student Name | Student ID |
| 5 | Suparan Sharma | 18-37275-1 |
| 19 | Md. Tazul Islam Kainath | 19-39341-1 |
| 14 | Md. Zunayed Hossain Saafin | 19-39304-1 |
| 17 | Sadia Islam | 19-39338-1 |

The project will be Evaluated for the following Course Outcomes

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| CO3: Choose appropriate software engineering model in a software development   environment | Total Marks |
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| Project Background Analysis (needs, goal, benefits, etc.) [5Marks] |  |
| Appropriate Process Model Selection and Argumentation with Evidence [5Marks] |  |
| Completeness, Spelling, Grammar and Organization of the Answer [5Marks] |  |
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| CO4: Explain the roles and their responsibilities in the software project   management activities | Total Marks |
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| Content Knowledge (e.g. System Functionalities, Related Product/Services) [5Marks] |  |
| Project Role identification and Responsibilities descriptions [5Marks] |  |
| Presentation Delivery and Defense [5Marks] |  |

* **PROBLEM DOMAIN**
* **Background to the Problem**
* Caring for aging parents must be the priority of every child, regardless of how pre-occupied they may be. We should make more effort to build a truly caring society which was willing to help the needy and less fortunate, especially our senior citizens. The younger generation today must learn to appreciate their parents and make it a culture and priority to care for them as they age
* However, there are some who tend to get carried away with their career and family commitments that they neglect their duties. No matter how busy you are, children have a responsibility to take care of their elders.
* **Solution to the Problem**
* In order to deal with this issue and make caring for our parents easier we present the tool 'Parental Security' with features to help maintain the daily needs, security and health of our elders. This software can feasibly meet the business objective.
* Parents and children have registered accounts with information of their voter ID. Each parent's account has their daily routine/needs and medical reports. Users will receive push notification according to the schedule of the parent's important daily needs and medicines. Parents can signal their children after taking medicines by pressing a button. If he/she fails to do so their children will be warned and recive emergency alerts to assist the parents.
* Currently apps like skype,whatsapp or facebook messenger allow audio and video calls which can be used for keeping contact. But these are manual solutions and they cannot be automated to adjust to someone's daily routine.
* **SOFTWARE DEVELOPMENT LIFE CYCLE**
* **Process Model**
* Here we are presenting a parental security system based on their daily routine to ensure their safety and convenience. Our proposal offers all the advantages like automated check-ups. The system also maintains communication between parents and their children through routine evaluation. The software will be developed based on utilizing web API’s and the concept of V-shaped model of software engineering. Which will use with object-oriented methodology for the development of the software.
* Our project requirements are clear that’s why we are using V-model of software engineering. Also communication must be simple and easy to use but the security must be high and rigid due to privacy issues which is following the V- model. This model focuses on verification and validation activities early in the life cycle thereby enhancing the probability of building an error-free and good quality product. It has higher chance of success over the waterfall model due to the early development of test plans during the life cycle.
* **Project Roll Identification and Responsibilities**

The rolls of the project are Planning and Sequencing, Resource Planning, Time and cost Estimating, Risk Analysis, Controlling Quality.

* **Planning and Sequencing:** It's a set of multiple processes or a task that is performed before the construction of the product starts.
* **Resource Planning:** In software Development, all the elements are referred to as resources for the project. It can be a human resource, productive tools, and libraries.
* **Time and cost Estimating:** The total time required to complete the project and total expenses to develop the software product is estimated.
* **Risk Analysis:** Risk analysis consists of all the activities like identification, analyzing and preparing the plan for predictable and unpredictable risk in the project. Changes in requirement and technologies and the environment can be a risk for development of a software.
* **Controlling Quality:** A set of activities designed to evaluate the quality of a component or system. The three class parameters that control software quality are products, processes and resources. Software Quality Control is limited to the Review/ Testing phases of the [**Software Development Life Cycle**](https://softwaretestingfundamentals.com/software-development-life-cycle/) and the goal is to ensure that the products meet specifications/ requirements.