**Software Development Process**

|  |  |  |
| --- | --- | --- |
| **1 – Requirement Name: Scrum Mythology** | | |
| **1.1** | We will use the Scrum framework in order to develop our project | Author: Fraser Dwyer |
| **Description:** We will use the agile development technique called ‘Scrum’. This involves regular ‘Sprint Meetings’, following sprint backlogs, and sprint reviews in order to gauge sprint progress. This development technique works well for obtaining rapid feedback. This is vital in a project like the one we are producing since our goals are forever changing with elements being implemented and tested and then potentially removed or altered. | | Priority: HIGH  Dependencies: 1.2, 1.3, 1.4 |
| **1 - Requirement Name: Number Of Sprints** | | |
| **1.2** | We will have at least 3 sprints | Author: Fraser Dwyer |
| **Description:** In order for our project to be successful, having many sprint meetings will be vital. Sprints allow us to have target focussed goals allowing for increased productivity. These sprints will also present developments in terms of what needs to be done in the next sprint by throwing up new issues which can be added to the product backlog and dealt with in the next sprint. | | Priority: HIGH  Dependencies: 1.3 |
| 1. **- Requirement Name: Sprint Duration** | | |
| **1.3** | Sprint duration will be between 1 and 3 weeks | Author: Fraser Dwyer |
| **Description:** The time we have been allocated for our project allows us between 1 and 3 weeks for a given sprint in order to fit in 3 sprints before the deadline. We aim to have 3 sprints as this allows us to review and make changes to any given approach we may be taking. | | Priority: HIGH  Dependencies: 1.2 |
| **1 – Requirement Name: Review Functional Requirements** | | |
| **1.4** | We will regularly review our functional requirements | Author: Fraser Dwyer |
| **Description:** We will regularly review our list of functional requirements after each sprint. This is important since each sprint will reveal changes that need to be made to our list for one reason or another such as software/hardware limitations, time restrictions, etc… | | Priority: HIGH  Dependencies: None |
| **1 – Requirement Name: Risk Managements** | | |
| **1.5** | We will incorporate risk management into our software process | Author: Fraser Dwyer |
| **Description:** We will be using risk management assessments in order to ensure our project is following a maintainable development design. For example, we will avoid at any cost to develop a server in a language only one person knows in case that person happens to fall ill. This would be a very big setback to the project and would halt progression massively. | | Priority: MEDIUM  Dependencies: None |
| **2 - Requirement Name: Altering Requirements** | | |
| **2.1** | After researching, we will add to our requirements | Author: Fraser Dwyer |
| **Description:** Throughout the process, we will be researching our chosen area of personal informatics. Due to this, we will gain more knowledge around our specific area of PI. We will use this continually growing understanding around our area of PI and use it to adapt and add to our list of initial requirements. | | Priority: MEDIUM  Dependencies: None |
| **3 – Requirement Name: >= 4 Core PI Articles** | | |
| **3.1** | We must read and cite at least four core articles in the area of PI | Author: Fraser Dwyer |
| **Description:** We will read and use at least four core articles in the area of PI in our project. This is so our project is well informed and knowledgeable surrounding the area of PI. This will also aid our project in terms of what to aim for what our project should and shouldn’t do. | | Priority: MEDIUM  Dependencies: None |
| **3 - Requirement Name: 8 Articles of Any Kind** | | |
| **3.2** | We will include 8 articles of any kind related to PI in our project | Author: Fraser Dwyer |
| **Description:** We will include these articles surrounding Personal Informatics as research within our project in order to have a wider range of knowledge and understanding regarding the project domain. | | Priority: MEDIUM  Dependencies: None |
| **3 – Requirement Name: Peer Reviewed Core Articles** | | |
| **3.3** | Our >= 4 core articles must be peer reviewed articles | Author: Fraser Dwyer |
| **Description:** By including peer reviewed articles within our project ensures that the articles that we are citing have been validated and deemed to be accepted as factual. This is important as it means that we are using scientifically accepted tests and data as part of our own project. | | Priority: MEDIUM  Dependencies: 3.1 |
| **3 – Requirement Name: Additional Research** | | |
| **3.4** | We will gather other research materials of varying qualities | Author: Fraser Dwyer |
| **Description:** By gathering other articles, not necessarily peer reviewed, means that we vastly broaden our range in terms of people’s studies and findings. Regardless of these articles’ quality, they will be useful to us by letting us see more than one perspective on certain things related to PI. | | Priority: LOW  Dependencies: None |
| **4 – Requirement Name: Data Usage** | | |
| **4.1** | Use users’ data for allowed purposes only | Author: Fraser Dwyer |
| **Description:** We will only allow for the user’s data to be used for the intended purpose. Their data will not be distributed to third parties and it won’t be used without the user’s consent. | | Priority: HIGH  Dependencies: None |
| **4 – Requirement Name: Data Storage** | | |
| **4.2** | Data will be kept securely | Author: Fraser Dwyer |
| **Description:** The user’s stored data will be kept secure by encrypting it and securing it on our server. Only authorised persons will be allowed to access it to prevent data being stolen or edited. | | Priority: HIGH  Dependencies: None |
| **4 – Requirement Name: Data Collection** | | |
| **4.3** | The user must have given permission for their data to be collected | Author: Fraser Dwyer |
| **Description:** The user must agree for any of their data to be collected and stored before it is recorded. The user must also be given permission to restrict the data that is collected about them. | | Priority: HIGH  Dependencies: None |

|  |  |  |
| --- | --- | --- |
| **5 – Requirement Name: Usability** | | |
| **5.1** | The software system must be easy to navigate and obvious to use. | Author: Fraser Dwyer |
| **Description:** This is to maximise the use each user gets out of using the software. By making the system easy to use, users will be able to access its full potential. | | Priority: HIGH  Dependencies: None |
| **6 – Requirement Name: Error Testing** | | |
| **6.1** | The system should carry out scheduled error tests | Author: Fraser Dwyer |
| **Description:** This ensures that the system, both hardware and software components are functioning as they should be and that the users’ stored data has not been compromised. | | Priority: HIGH  Dependencies: None |
| **6 – Requirement Name: Test Plans** | | |
| **6.2** | The system must pass a series of test plans | Author: Fraser Dwyer |
| **Description:** The system produced will undergo a series of test plans since test-driven development is a great way to find unexpected outputs and bugs which otherwise may go undetected. Evidence of this must be provided. | | Priority: HIGH  Dependencies: None |
| **6 – Requirement Name: State and Show Clear Hypotheses** | | |
| **6.3** | Our hypotheses must connect claims found in research to observable behaviours in the finished system. | Author: Fraser Dwyer |
| **Description:** This is so that our final project can be seen to have been based off scientifically correct research and that our project has achieved what we set out for it to do. | | Priority: HIGH  Dependencies: None |
| **6 – Requirement Name: Analyse Empirical Data** | | |
| **6.4** | We must analyse the data generated from users using our finished system. | Author: Fraser Dwyer |
| **Description:** We will analyse data generated by our system using valid statistical methods to discover any trends or patterns within our collected data. | | Priority: HIGH  Dependencies: None |
| **6 – Requirement Name: Error Reporting** | | |
| **6.5** | The system should generate error reports upon crashing | Author: Fraser Dwyer |
| **Description:** The system should generate user friendly error messages to users depending on the reason as to why the system failed. The system should also send detailed error reports back to the developers so that corrections can be made to the system if necessary. | | Priority: HIGH  Dependencies: None |
| **6 – Requirement Name: Interface Reliability** | | |
| **6.6** | The user interface must be tested thoroughly | Author: Fraser Dwyer |
| **Description:** The user interface must be thoroughly tested against things such as invalid user input and error handling to minimise system failures. | | Priority: HIGH  Dependencies: None |
| **7 – Requirement Name: Customisation** | | |
| **7.1** | The system should offer some customisation options | Author: Fraser Dwyer |
| **Description:** The system should be able to offer the user varying levels of customisation for displaying their data. For example, offering light or dark mode. | | Priority: LOW  Dependencies: None |