**Process Model Report**

Due Date: February 10, 2020

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**Introduction:**

This report describes Team 4’s selection of a software process model for its project to develop a mobile application to connect teachers and schools in Northern Africa.

**Questions and Answers:**

1. **What primary process model does the team plan to use?**

We will use the iterative process model because it will allow us to alter and add to the requirements of the project. We think this will be important because our project has a few requirements that we may or may not be able to produce and this process will allow us to evaluate these requirements after each iteration.

1. **What secondary process model(s) does the team plan to use?**

We plan to use the Waterfall Model as a secondary process model to structure each iteration of our process. The Waterfall is a simple model which is very step by step, allowing us to focus more on learning new material to complete this project rather than having to adjust the timeline as much. Activities are sequential and each activity defines the next one in the sequence. This also facilitates checking product quality at the end of each task, and nicely separates costs.

This model also allows for specialization, and enables us to divide and conquer. Members of the team can specialize in different areas, and can then staff the appropriate aspects of the project.  This will be useful as our product has multiple facets such as database work and app development. While this model initial assumes that each work product can proceed without revisiting each problem, this is solved with our primary iterative model, which facilitates revisiting and modifying earlier products. This does also influence how early we determine our hardware needs, which will need to be higher on our priority list when proceeding with our project.

We are not concerned with backing off software delivery until the end of the project period, since there is currently no expectation for product delivery anywhere else in our development process. It also seems that no matter what process model we use, requirements will have to change, so “requirement bloating” is not a large concern for us either.

1. **What project or team characteristics led to this decision?**

Our project has defined subproblems and functionality requirements that can be easily separated into different iterations. Some parts of our project, such as the matching algorithm, may be harder to complete, and as such, the iterative development process allows for us to stop developing in between iterations if necessary.

The Project Control List associated with the iterative model gives us clear ways to define each iteration, and offers flexibility in that it may be edited at the beginning of that iteration. Since we are taking into account specific needs of the stakeholders of our project, we can separate those needs into different iterations and easily create the Project Control List. Additionally, if we are able to keep in contact with the project stakeholders, we will be able to easily share updates after each iteration. This way, if needed, we can also update iterations as we go.

We also took into account the limitations of the iterative model, including: the likely redesign of completed functionality and the possibility of compromised architectural integrity and decided that this was still the best model for us, despite these limitations. We will definitely need to stay focused on the architecture of the project as we continue working on it, but we are confident we will be able to keep it under control.

1. **Were any other alternatives considered and rejected? If so, why?**

We briefly considered the spiral model before we had a clear idea of what our final project would look like. However, we now have a better vision of the project and have realized that we will not need to constantly re-evaluate our project requirements with potential stakeholders. We also know that we will not be able to have constant communication with our stakeholders. Additionally, we would like to create working segments of code throughout the process rather than focusing on creating prototypes as is done in the spiral model. Therefore, we decided that it will not be necessary for us to use the spiral model.

1. **State the actual sequence of activities to be performed**

Our first activity will be to define our requirements. We will use Mariem’s contacts at LEAPS academy to get user input for this step. Once we have determined our requirements we will work on the architecture and design of the project. This phase will require a certain amount of research by the team to determine the best way of designing our project. After this phase we will select some of our requirements to be implemented in the first iteration of our software. After building and testing this first iteration to our satisfaction, we will return to our initial list of requirements and select the once we would like to implement in the second iteration. The iterations will continue until the software meets the necessary requirements and passes rigorous testing.