# SOFE 3490U Software Project Management

# Lab 3: MusicHub

| Name | ID |
|---|---|
| Harsh Patel | 100580778 |
| Karan Jariwala | 100619029 |

**Task 1: Estimated Effort**

### 1.1 Function Point

| End User Requirement | Type | Complexity | Function points |
|---|---|---|---|
| Enter User Info | External Input | Low | 1 |
| Login | External Inquiry | Medium | 3 |
| Add Artist | External Interface File System | Low | 2 |
| Add Content | External Interface File System | Low | 2 |
| Validate Content | External Inquiry | Medium | 4 |
| Stream | External Output | High | 5 |
| Create User Playlist | External Interface File System | Medium | 3 |
| Validate Genres | External Inquiry | Low | 2 |
| Track Royalty | External Inquiry | Low | 2 |
| Offline Playback | Logical Interface File | Medium | 4 |
| AI created playlist | Logical Interface File | High | 5 |
| Hiring New Staff | N/A | N/A | 1 |
| Designing of UI | N/A | N/A | 3 |
| Testing | N/A | N/A | 5 |
| Marketing | N/A | N/A | 2 |
| Release | N/A | N/A | 1 |
| Total | | | 45 |

### 1.2 COCOMO Model

Cocomo (Constructive Cost Model) is a regression model based on LOC, i.e number of Lines of Code. It is a procedural cost estimate model for software projects and often used as a process of reliably predicting the various parameters associated with making a project such as size, effort, cost, time and quality.

The constants for a and b are 2.4 and 1.05 respectively. This project type is Semi-Detached. Given our estimation of KLOC our group agreed upon 6000 lines of source code.
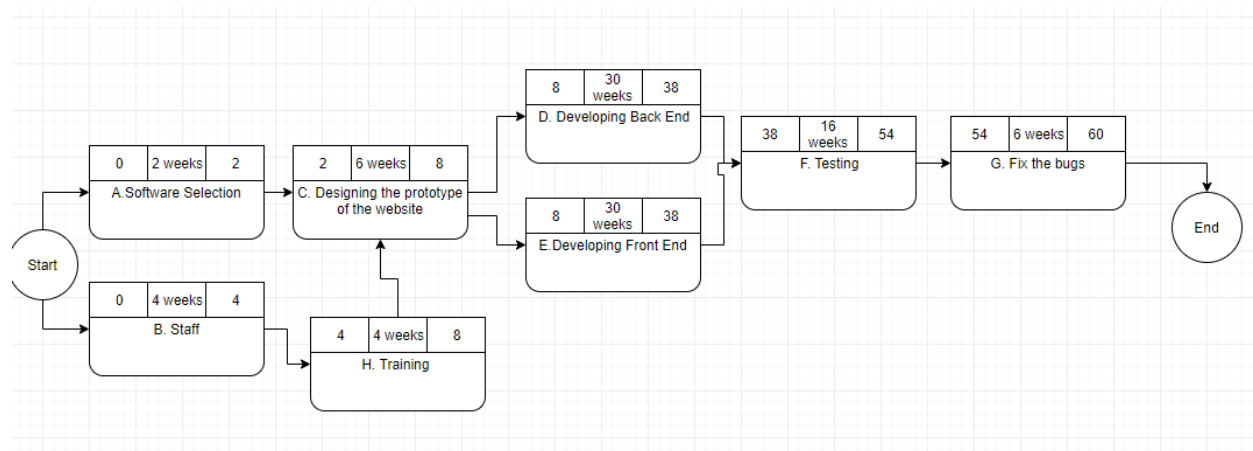
- Semi-detached (a=2.4 and b=1.05)
- KLOC = 6
- $E = a(KLOC)^2$

$$= 2.4(6)^{1.05}$$

$$= 15.7496 \text{ Person-Months}$$

Therefore, using the basic model, we can assume an approximate 15 months, to finish this project.

## Task 2: Project Activity Diagram

| 8 | 30 weeks | 38 |
|---|---|---|
| | D. Developing Back End | |

| 0 | 2 weeks | 2 |
|---|---|---|
| | A.Software Selection | |

| 2 | 6 weeks | 8 |
|---|---|---|
| | C. Designing the prototype of the website | |

| 38 | 16 weeks | 54 |
|---|---|---|
| | F. Testing | |

| 54 | 6 weeks | 60 |
|---|---|---|
| | G. Fix the bugs | |

| 8 | 30 weeks | 38 |
|---|---|---|
| | E.Developing Front End | |

Start

| 0 | 4 weeks | 4 |
|---|---|---|
| | B. Staff | |

| 4 | 4 weeks | 8 |
|---|---|---|
| | H. Training | |

End

## Task 3: Risk

- The most important risk when developing is time allocation since you do not want to waste too much time on one particular task.

- Money allocation is just as important as time, again there is no need to spend too much money on useless.

- To reduce each risk our engineers will use multiple techniques and use prior projects as well to make the task easier to comprehend.

- We are going to be very thorough when prototyping to reduce real time errors that the public can encounter on a daily basis.

- We are going to be using secure https and ssl connections to store the data of our clients as well as our music producers from getting hacked.

- There is always a risk when first hiring a new team of developers since not everyone will have previous experience in the correct department which will take time.