

**Department of Computing**

**Software Projects**

**(55-407815-AF-20234)**

**Stage 1 and Stage 2**

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**Table of Contents**

[1. Stage 1 3](#_Toc128580028)

[1.1 Software Project Artefacts 3](#_Toc128580029)

[1.1.1 Project Description and Users 3](#_Toc128580030)

[1.1.2 User Stories and Acceptance Tests 3](#_Toc128580031)

[1.2 Software and its Presentation 4](#_Toc128580032)

[1.2.1 The Software Prototype 4](#_Toc128580033)

[1.2.2 Video Presentation 4](#_Toc128580034)

[1.3 Incorporation of Formative Feedback 4](#_Toc128580035)

[2. Stage 2 4](#_Toc128580036)

[2.1 Use Case Diagram 4](#_Toc128580037)

[2.2 Design 5](#_Toc128580038)

[2.3 Software and its Presentation 6](#_Toc128580039)

[2.3.1 The Production-Quality Software 6](#_Toc128580040)

[2.3.2 Video Presentation 6](#_Toc128580041)

[2.4 Transitioning a Prototype to Production-Quality Software 6](#_Toc128580042)

[2.5 Test Specification 6](#_Toc128580043)

[2.6 Incorporation of formative feedback 7](#_Toc128580044)

[3. Evaluative Report on Legal, Social, Ethical and Professional Issues (up to 500 words) 7](#_Toc128580045)

[3.1 Stage 2 7](#_Toc128580046)

[3.1.1 Relevant Issues 7](#_Toc128580047)

[3.1.2 Discussion 7](#_Toc128580048)

[4. References 7](#_Toc128580049)

# 1. Stage 1

## 1.1 Software Project Artefacts

### 1.1.1 Project Description and Users

Briefly outline your project in the context of a business. Who are the users in this context? Identify two users and relevant personas for these users. If you identify more than two users, this will be fine, e.g.

|  |  |
| --- | --- |
| **Name** | **Description** |
| Registered User | Has access to transfer system, can create wallets for currency, can transfer currency between wallets, can deposit/withdraw from wallets. |
| System Admin | Has access to backend/frontend, makes sure the site or database is working and UpToDate. |
| Finance Admin | Keeps the exchange rates UpToDate, has ability to manually change exchange rates to keep up with active exchange rates. |
| Legal Admin | Keeps track of currency exchanges between accounts/wallets/countries, can suspend transactions due to suspicious activity. |

Based on the users, appropriate personas are outlined here, e.g.

Tom is a meeting initiator who wants to arrange a meeting to discuss the marking moderation in Software Projects.

### 1.1.2 User Stories and Acceptance Tests

Provide three user stories for each user you identified for the project. Provide a set of acceptance tests for each user story you identified, e.g.

|  |  |  |
| --- | --- | --- |
| **User Story** | **Notes** | **Acceptance Test(s)** |
| Billy (Registered User)  Wants to transfer 1,000,000.00 TRY to GBP. | The limit for transfer is 1,000,000.00 TYR.  When transferring 500,000.00 TYR – 1,000,000.00 TYR he must confirm he has the required amount available. | * If Billy has the required funds available, the transaction will work. * Otherwise, if Billy doesn’t have the required funds he must confirm with the Finance and Legal team when he has the funds ready to transfer. |

|  |  |  |
| --- | --- | --- |
| **User Story** | **Notes** | **Acceptance Test(s)** |
| Jimmy (Registered User)  Is attempting to transfer a small amount of TRY to GBP. | Min transfer for TRY is 100TYR and Max transfer 1,000,000.00 TRY. | * If transfer is <100TRY display error * Otherwise, if >100TRY allow transaction <1,000,000.00 TRY |

|  |  |  |
| --- | --- | --- |
| **User Story** | **Notes** | **Acceptance Test(s)** |
| Bob (Legal Admin)  Spots a transaction being requested at maximum limit of 1,000,000.00 GBP. | Transactions of 500,000.00 – 1,000,000.00 GBP are automatically flagged for proof of funds. | * If the requestor confirms they have the requested amount, then the transfer is accepted. * Otherwise, If the requestor does not have funds ready, they must confirm when the funds are available. |

|  |  |  |
| --- | --- | --- |
| **User Story** | **Notes** | **Acceptance Test(s)** |
| Bly (Finance Admin)  Due to inflation in TRY the price of 100 TYR is now 0.50GBP | Any transaction must be equivalent to or above 1GBP. | * If transfer rate >= 1GBP transfer is approved. * Otherwise, if transfer is <1GBP transactions are denied until transfer rates improved. |

|  |  |  |
| --- | --- | --- |
| **User Story** | **Notes** | **Acceptance Test(s)** |
| Bly (System Admin)  Due to system downtime the live transactions must be tested to be within 15mins of the live server | For accurate transaction rates the system must be accurate to 15mins | * If system is not within 15mins transfer must be denied and an update will need to be posted. * Otherwise, if the system is within 15mins after downtime, tests must be run before transactions can take place. |

|  |  |  |
| --- | --- | --- |
| **User Story** | **Notes** | **Acceptance Test(s)** |
| Helga (Legal Admin)  Due to suspicious activity with a user’s accounts Helga must suspend the account and find evidence of illegal money transfers. | Accounts are limited to 1,000,000.00 in all currencies.  Accounts transferring 500,000.00 – 1,000,000.00 in any currency must verify they have the funds available and a receipt for how they acquired the funds.  Multiple transfers within a week which fall into the verification limit are flagged to finance and legal teams for investigation. | * If the account has receipts that do not match the transfer or are viewed as fraudulent then evidence will sent to the relevant country’s fraud investigation departments. * Otherwise, if transfer is flagged as suspicious though the suspended user has evidence of how they have received the funds the account will re-activated. |

## 1.2 Software and its Presentation

### 1.2.1 The Software Prototype

You are NOT expected to submit the project, including all its components (e.g., codebase), compressed in a zip file (or 7z). We will rely on your video presentation to assess the quality of your prototype.

### 1.2.2 Video Presentation

The project must be showcased in a video recording of up to 20 minutes. We will stop watching after the 20th minute. You are expected to upload the video file to YouTube as a non-public unlisted video and include its link here, e.g.

[Link](https://www.youtube.com/watch?v=-asJzkrvlDM&feature=youtu.be&ab_channel=GeorgeSenior) to YouTube Video

## 1.3 Incorporation of Formative Feedback

Provide evidence of how you evaluated and acted on the formative feedback you received from your tutors, e.g., minutes of meeting, copies of emails, together with action plan.

2. Stage 2.

|  |  |  |
| --- | --- | --- |
| **Stage 1** | | |
|  | **Feedback Received** | **Action Taken** |
| Week 1 |  |  |
| Week 2 |  |  |

# 2. Stage 2

## 2.1 Use Case Diagram

Insert your diagram here in **png** format and provide a brief annotation, e.g.,

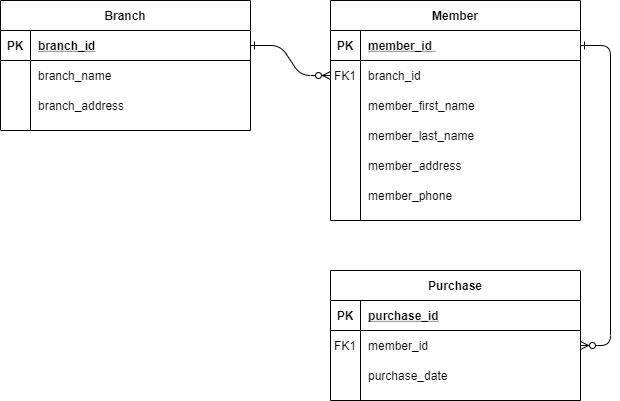
Diagram

Description automatically generated

Four actors are identified. Customer (Standard and special) represent bank customers. Customers have access to different functionality depending on their account type. Bank employees have access to back-end functions of the system.

## 2.2 Design

Depending on your degree route provide either a class diagram (Software engineering) or an entity-relationship diagram (Software Engineering and Computer Science). The design must be annotated outlining the purpose of each class/entity within the design, e.g.,



SHUpermarket has various branches in Windhoek. In this context, customers must be registered as members in a specific branch. Members can only purchase products in the branch which they are registered. A branch can have many registered members. Each branch stocks many items, and each type of item can be stocked at multiple branches.

A class diagram for a car park.


The FullSign class is responsible for indicating whether or not a car park is full. The EntrySensor class detects the arrival of a car, determines whether or not a car has entered a car park and whether or not a car is still within the vicinity of an entry barrier.

## 2.3 Software and its Presentation

### 2.3.1 The Production-Quality Software

You are expected to submit the project, including all its components (e.g., codebase), compressed in a zip file (or 7z). The file should be named “Project 2 (Your name)” and must be uploaded to Blackboard as directed in the relevant submission point.

### 2.3.2 Video Presentation

The project must be showcased in a video recording of up to 20 minutes. We will stop watching after the 20th minute. You are expected to upload the video file to YouTube as a non-public unlisted video and include its link here, e.g.

[Link](https://www.youtube.com/watch?v=-asJzkrvlDM&feature=youtu.be&ab_channel=GeorgeSenior) to YouTube Video

## 2.4 Transitioning a Prototype to Production-Quality Software

Provide evidence of how you transitioned your prototype to a production-quality (where possible) software system systematically. This may include use of a systematic method that enables you to convert class diagrams to a corresponding implementation or use of a systematic approach to convert entity-relationship diagrams to a corresponding database implementation. You can also include such details as how you interfaced to a database system within an application (if applicable to your project).

## 2.5 Test Specification

In this sub-section, you are required to outline your testing strategy together with evidence (i.e., test results). Specifically, provide a light-touch test specification outlining how acceptance tests will be carried out, e.g.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Test ID** | **Test Description** | **Test Scenario** | **Expected Result** | **Test Result** | **Remark** | **Programmer Response** |
| C1-TID03 | Browse a CSV file | Happy day scenario: user browses a CSV file to view |  |  |  |  |
| C1-TID04 | Browse a CSV file | Negative scenario: Import a corrupted CSV file- missing at least 1 delimiter. |  |  |  |  |
| C1-TID05 | Browse a non-CSV file | Negative scenario: User is trying to browse other than CSV file |  |  |  |  |
| C1-TID06 | Browse an empty record of a CSV file | Negative scenario: User is trying to browse a CSV file with empty record |  |  |  |  |
| C1-TID07 | Browse a CSV file with more than 60 columns/variables | Negative scenario: … |  |  |  |  |

## 2.6 Incorporation of formative feedback

Provide evidence of how you evaluated and acted on the formative feedback you received from your tutors, e.g., minutes of meeting, copies of emails, together with action plan.

|  |  |  |
| --- | --- | --- |
| **Stage 2** | | |
|  | **Feedback Received** | **Action Taken** |
| Week 1 |  |  |
| Week 2 |  |  |
| Week 3 |  |  |
| Week 4 |  |  |

# 3. Evaluative Report on Legal, Social, Ethical and Professional Issues (up to 500 words)

## 3.1 Stage 2

### 3.1.1 Relevant Issues

Identify two or three issues that specifically relate to your project (this could be GDPR, copyright, accessibility, testing, etc.), and briefly explain their relevance to your project.

### 3.1.2 Discussion

Discuss what impact these will have on the project. Specifically, you may discuss how these issues will impact on the way you will transition your prototype you developed in Stage 1 to a production-quality (where possible) software system in Stage 2. As well as supporting your discussion with references, throughout your work you are also expected to identify recent public examples that have been reported in the news (or other reputable sources), for example if you are creating an application that will store personal data, a useful example would be to mention the fine British Airways received for being in breach of GDPR, all of which should be cited using the APA format.

# 4. References

Your reference list should contain citations to external sources that have been relied on throughout your project’s development and writing this portfolio. The citations should conform to the APA referencing system[[1]](#footnote-2), e.g.,

Fitzgerald, J., & Hayward, P. (2009). Inflamed: Synthetic folk music and paganism in the island world of The Wicker Man. In P. Hayward (Ed.), Terror tracks: Music, sound and horror cinema (pp. 101-111). London: Equinox.

Melchers, G., Shaw, G., & Shaw, P. (2013). World Englishes (2nd ed.). Retrieved from http://lib.myilibrary.com

Miller, D. (2016). Social media in an English village. https:// doi.org/10.14324/111.9781910634431

TED. (2007, January 6). Sir Ken Robinson: Do schools kill creativity? [Video file]. Retrieved from https:// www.youtube.com/watch?v=iG9CE55wbtY

1. <https://libguides.shu.ac.uk/ld.php?content_id=32537001> [↑](#footnote-ref-2)