Transcendence: Additional Project Requirements

Congratulations on reaching Rank 6 of the Common Core.

To complete Rank 6 (and hence complete the Common Core) you need to successfully validate Exam Rank 6 and Transcendence.

Transcendence is a group project requiring (in its native form) 245 hours.

At 42 Abu Dhabi, for students on the accredited pathway, we have some additional mandatory requirements. These requirements are focused on activities you will likely be undertaking whilst working on the project, but we require you to make these tasks 'visible' for our assessment.

The additional tasks are:

1. Production of a Project Management document
2. Production of Project Design document
3. A presentation of your activities and learning on Transcendence

The above tasks are detailed below.

As a guide, the additional tasks should equate to around 25 hours of individual student effort. Hence, in total, Transcendence will require around 270 hours of student effort from each group participant.

1.0 Production of Project Management document

This task requires you to demonstrate that the project was a planned and monitored endeavor. Specifically, you are required to produce and submit:

1.1 A Project Timeline – shown via a Gantt chart

The Project Timeline should indicate the main phases of work, the associated tasks of each phase and the planned start date and duration of each task.

Your Gantt Chart should also include key milestones and a description of the ways you monitored actual progress against planned progress. To be clear, you should demonstrate how you knew if the project is progressing according to plan, and if not, what steps you will take to address any *drift* in timelines.

1.2 A Risk Register

The Risk register should identify the likely risks which might impact the delivery of your Transcendence project.

The Risk Register should identify:

- The risk
- The likelihood of the occurrence of the risk (a numerical score)
- The impact to the project if the risk actually occurred (a numerical score)
- A brief mitigation plan for each risk

2.0 Production of project design documentation showing

This task requires you to demonstrate the thought processes involved in arriving at your submitted project. Specifically, you are required to produce and submit:

2.1 A list of Functional and Technical requirements

2.2 Wire frames of major game components

Showing the flow of the game and your considerations for Human Computer Interactions (HCI).

2.3 Flow chart of the game's functionality

3.0 Critical Review Presentation

This task requires you to present to a small staff group your reflections on:

- The team function and your management of the project
- The game and your learning on the project

Appendix A

1.0 Project Management Documentation

1.1 A Project Timeline – shown via a Gantt chart

Produce a Gantt Chart showing phases, activities and milestones

A Gantt Chart is commonly used in project management to show project phases, activities (tasks / events) presented against a time line.

Essentially, each activity is represented by a horizontal bar; the position and length of the bar reflects the start date, duration and end date of the activity. Creating a *bar* for each of the project activities allows a viewer to see:

- the various phases and associated activities of each phase
- the time scale of each activity (planned start date, duration and end date)
- where activities overlap with other activities, and the duration of the overlap
- the time scale of the project from inception to completion

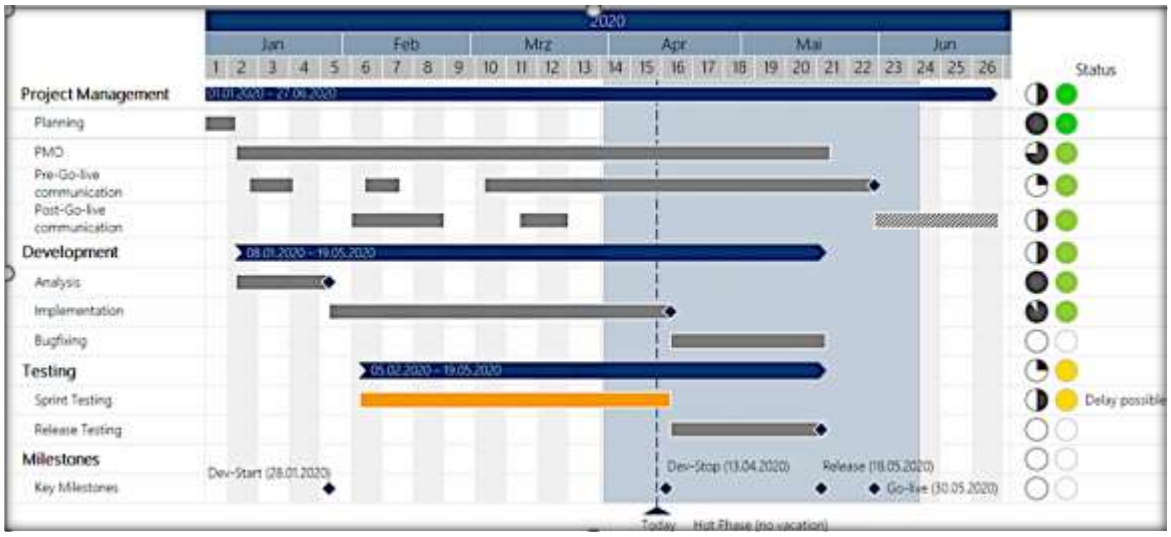

Figure 1. Example Gantt Chart

When do we need to use a Gantt Chart?

- When project schedules lack flexibility
- When we want to track and monitor a project's progress

1.2 Production of a Risk Register

Produce a Risk Register

Identify possible risks which might impact the delivery of your Transcendence project.

A Risk Register is a document used to identify potential project setbacks. A Risk Register aims to collectively identify, analyze, and solve risks before they become problems.

A Risk Register should include:

- a description of each possible risk
- the likelihood of the risk occurring (a numerical score)
- the impact to the project if the risk occurs (a numerical score)
- the risk owner(s)
- the mitigating action

Date Raised	Risk Description	Likelihood Of the Risk Occurring	Impact If the Risk Occurs	Severity *Rating based on impact & likelihood.*	Owner *A person who will manage the risk*	Mitigating Action *Actions to mitigate the risk, e.g., reduce the likelihood.*
dd/mm/yy	*This is a sample text that you can edit. You can change font.*	**Medium**	**High**	**High**	Project sponsor	*This is a sample text that you can edit. You can change font.*
dd/mm/yy	*This is a sample text that you can edit. You can change font.*	**Low**	**High**	**High**	Project sponsor	*This is a sample text that you can edit. You can change font.*
dd/mm/yy	*This is a sample text that you can edit. You can change font.*	**Low**	**Medium**	**Medium**	Project manager	*This is a sample text that you can edit. You can change font.*
dd/mm/yy	*This is a sample text that you can edit. You can change font.*	**Low**	**Medium**	**Medium**	Project sponsor	*This is a sample text that you can edit. You can change font.*

Figure 2. Example Risk Register

Finding the product of (multiplying) the Likelihood with the Impact will give you a risk score for each risk. The ranked risk score will provide priority areas to focus on.

Figure 3, a Risk Matrix, shows the product of Likelihood and Impact and some 'typical' risk score descriptors.

To note: it is possible that certain projects may wish to deploy certain weightings to particular risks irrespective of the product to ensure the risk is suitably monitored.

Impact

How severe would the outcomes be if the risk occurred?

What is the probability the risk will happen? — **Probability**

	Insignificant 1	Minor 2	Significant 3	Major 4	Severe 5
5 Almost Certain	Medium 5	High 10	Very high 15	Extreme 20	Extreme 25
4 Likely	Medium 4	Medium 8	High 12	Very high 16	Extreme 20
3 Moderate	Low 3	Medium 6	Medium 9	High 12	Very high 15
2 Unlikely	Very low 2	Low 4	Medium 6	Medium 8	High 10
1 Rare	Very low 1	Very low 2	Low 3	Medium 4	Medium 5

Figure 3. Risk Matrix

Appendix B.

2.0 Project Design Documentation

2.1 Functional and Technical Requirements

Develop a list of the major functional and technical requirements for the game. Be sure to refer to the Project Descriptor for the general requirements of the game.

Functional Requirements:

A functional requirements document contains the details of product features or functions that developers must implement to enable end users to accomplish their tasks.

Examples include:

- The system must allow the user to enter data
- The system must generate reports every 24 hours
- The system must send a confirmation email whenever an order is placed
- The system must allow users to verify their accounts using their phone number

Technical Requirements Document:

A technical requirements document contains the details of how the functionality of an application can be achieved.

Examples include:

- Performance: The system will have an average page load time of less than 2 seconds.
- Serviceability: Changes and upgrades to the system will not require total outages.
- Privacy: The user interface will not allow employees to view customer birth dates stored in the customer database.
- Information Security: User credentials and all personal identifiable information will be encrypted in storage and transit.
- Data: User data will be sourced from the customer database without permanently storing it in the system.

In simple terms, functional requirements are about what you want from your software / application, and technical requirements are about how you get there.

2.2 Wireframes

Produce Wire Frame images of the proposed functionality for the major screens of the game.

Essentially, wireframes are visual guides in which designers propose elements for screens and webpages, and show how experimental solutions would flow for users.

Wire-framing is invaluable early in the 'interaction design process' for design teams to explore how concepts accommodate user needs. Good wireframes are skeletons for powerful prototypes and delightful designs.

In your Wireframes you should show how your game considers Human Computer Interaction (HCI) / User Experience (UX)/ User Interface (UI).

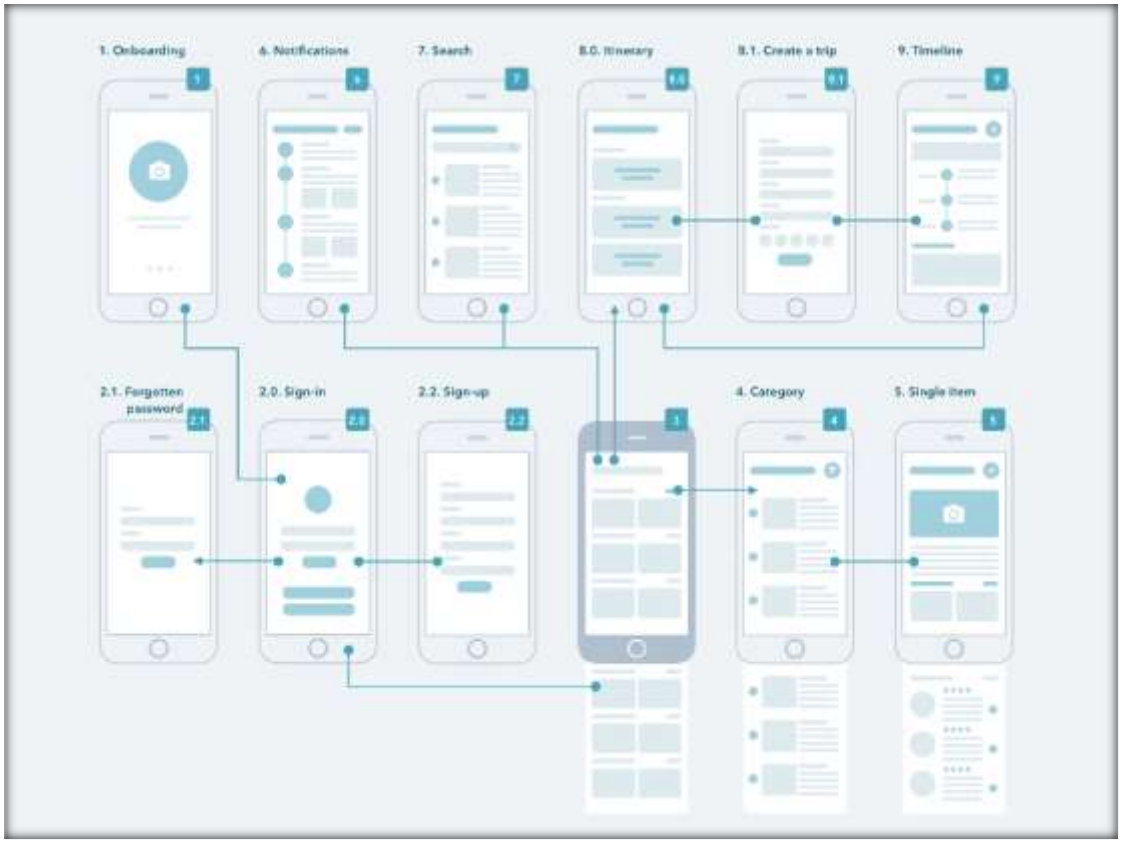

Figure 4. Wireframe of a Traveling App

2.3 Flow Chart

Produce a flow chart of the game's functionality.

A flow chart is a visual representation of the sequence of steps and decisions required to perform a process. Each step in the sequence is represented by a shape. Steps are linked by connecting lines and directional arrows.

A flow chart is a powerful tool that, when properly designed and constructed, communicates the steps in a process. This allows anyone to follow the process logically from start to end.

To note: There is a standard protocol for the shapes used in flow charts. See for example https://www.lucidchart.com/pages/flowchart-symbols-meaning-explained

Some examples of Flow Charts are shown in figures 5-7

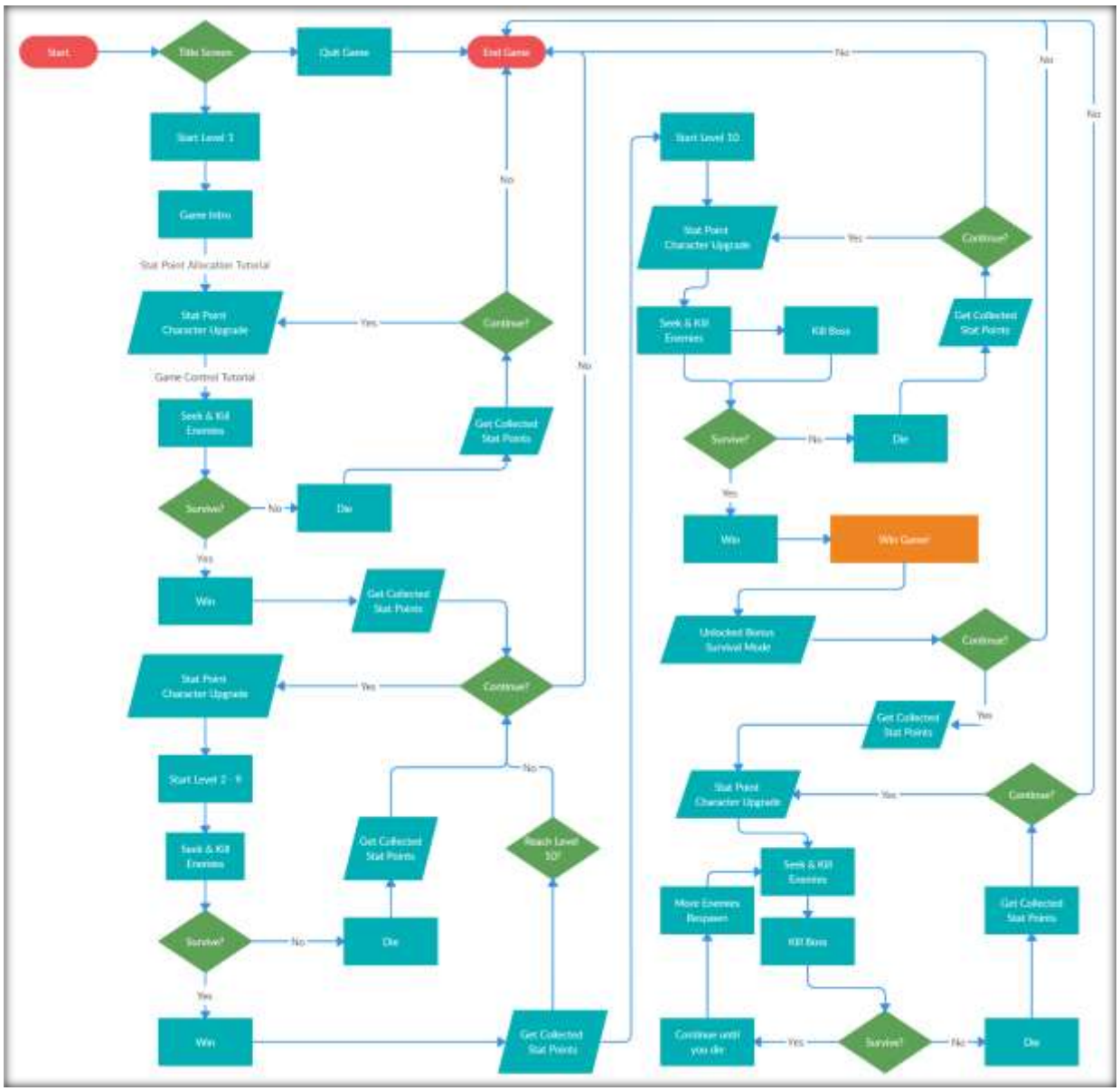

Figure 5. 'Action Role Playing Game' Flow Chart

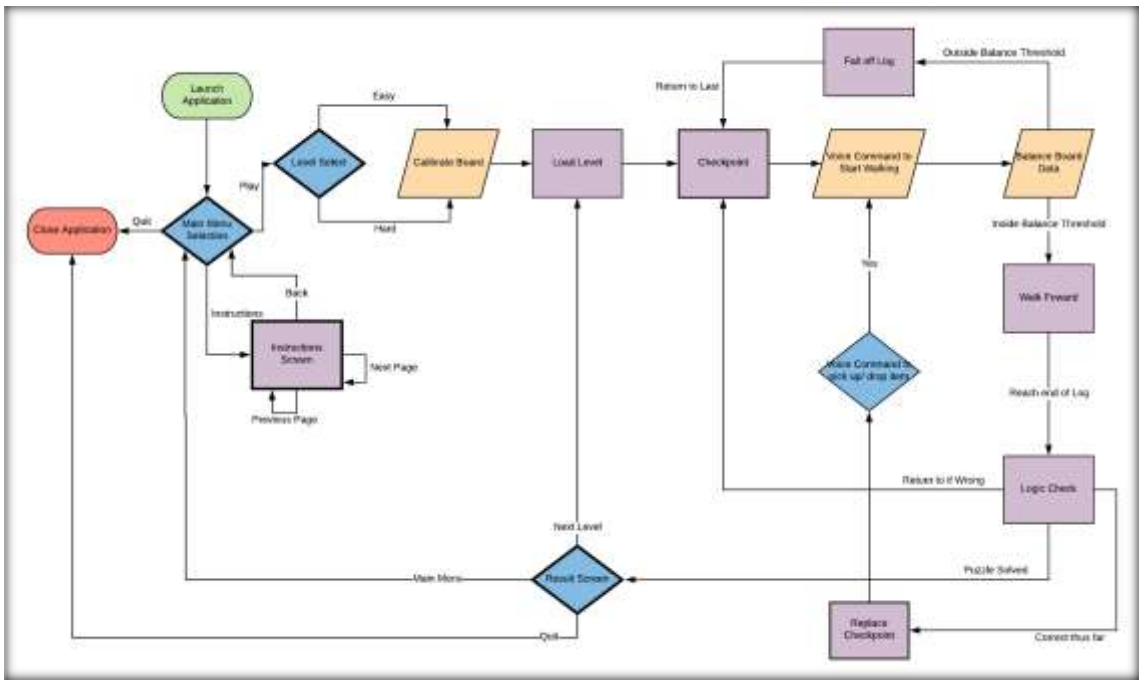

Figure 6. 'Don't Fall: The Game' Flow Chart

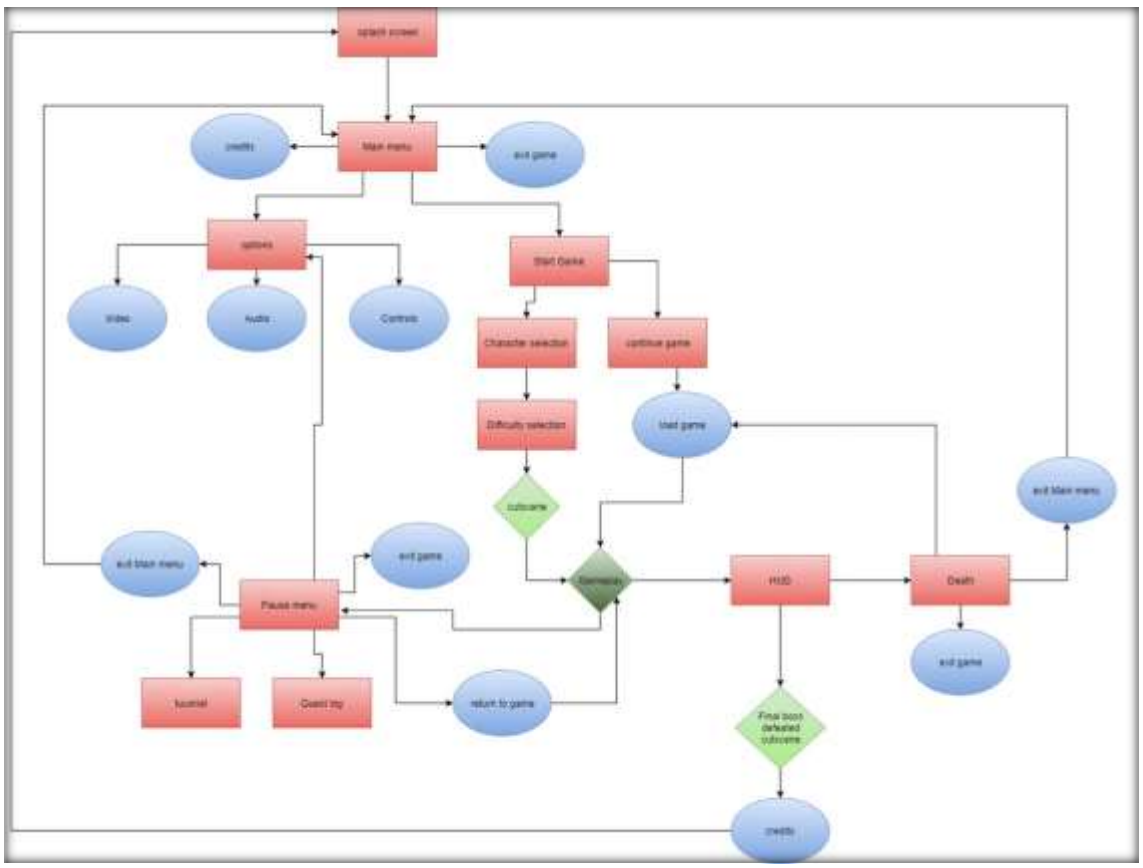

Figure 7. 'Alan Horton's Game Design' Flow Chart

Appendix C.

3.0 Presentation of project and learning

The final component of the additional tasks is a 30 minute presentation to small staff group. The presentation should include your critical reflections of your achievements, ways of working and what you learned whilst undertaking the project.