# Final Adventure PID PROCO304 Daniel Bendell

### Introduction

Final Adventure is a turn based strategy game (TBS) that is being developed for PROCO304. It will be an isometric based environment where the player or players have to strategically manipulate their characters around the map and defeat their opponent. Unlike most traditional TBS games this will focus on the player’s movement, making them place and move their characters in suitable positions depending on the fighting situation.

### Background/Motivation

The reasoning behind this project idea is my personal love towards TBS games and how they engage the player, making them apply real strategic actions in order to make the best of a given situation. TBS games give the player several different options when playing a game. Granted, there is generally a good and a bad way of playing them, which either makes the process easier or harder to complete, but this level of diversity really attracts the user’s attention.

Seeing that programming and developing games are my hobbies and the areas I wish to work in, I see this as a fantastic opportunity to further develop my skills, as well as give me the chance to put a large amount of time and focus into a single project. During full scale development I normally shy away from games as they require a diverse skill set and I like to focus on the programming, however this should prove a tremendous challenge and will test my ability to properly manage a project and scope out the initial objectives without trying to reinvent the wheel or development the newest form of gaming single-handedly.

### Project objectives

1. To analyse existing turn based strategy games, note pros and cons of similar indie developed games.

2. Analyse the areas of the projects I am less skilled in (Art, Modelling, Sound), formulate solutions to issues.

3. Analyse development environments, which one is going to be most beneficial, boost and aid development.

4. Scope out development mile stones, what is going to be key to make a minimal viable product, increase the focus on areas that are going to be most important.

5. To create an interactive TBS game that immerses the player in a strategy based platform.

6. To further enhance my programming and game development skills with a fully functional game.

### Initial scope

1. Identify indie TBS games that have a positive following or have done well within the market, note what I think they did that helped them stand out above the rest as well as what I would avoid doing and why. This will give me a strong starting point and a clearer idea of what is working within the current market.

2. Identifying the weaker areas of the project will allow for third party assets to aid the application, instead of spending valuable time learning how to complete extended tasks. Finding existing assets or create a simplistic theme that minimalizes the unwanted workload.

3. Finding a suitable development environment that is going to assist the game creation.

4. The proposed game will

A) Allow players to create or (possibly) join a hosted game

B) Allow players to place their characters in a specific formation within the map

C) Give players a variety of different characters to choose from

D) Allow players to complete actions within the players turn e.g. attack, defend and move

E) Apply changes to characters depending on the players actions, based on their stats

F) Have an end of game state notifying the players of the winner and loser

5. Modify interactions and work flow based on user feedback. This should give the game a better user experience instead of tailoring the game to my own specification.

5. Method of approach

There are several key features that will need to be in place before the game is even considered a minimal viable product. Key feature like, creating a game environment that allows user interaction, creation of in game characters that the player can choose from, all of which can move around the map, play against either AI or another player in real time, statistical changes to characters based on user actions (attacking an enemy). The game development has a range of different available platforms to offer e.g. Unity, Unreal Engine, CryEngine. Regardless of the final decision it will be written in C#. This will cover all of the game functionality without the need for additional tools.

Depending on the decided approach for the game one of the areas of development could be server side and database related. This would allow for multiplayer interactions and the use of saving and returning to game states. Possible technologies are ASP.net/SQLServer or Node.js/MySQL.

Creating 3D models is a possibility in this project so applications like Maya and Blender will be considered with Photoshop and Illustrator being used to create any 2D art work.

### 6. Initial project plan

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| Stage | **Expected Start Date** | **Expected Completion Date** | **Products/Deliverables/Outcomes** |
| Initiation |  | 5 Feb | PID |
| Product investigation | Sat  6 Feb | Tue  9 Feb | Investigate existing products with similar concepts. Document positive development techniques |
| Research development environments | Wed  10 Feb | Fri  12 Feb | Look into which development environments are going to make it easiest for me to create the product |
| High level design | Sat  13 Feb | Thu  18 Feb | Designs for game architecture, database structures, API calls, basic level design |
| Development stage one | Fri  19 Feb | Fri  4 Mar | Minimal functionality, integration of extending applications e.g. database, server |
| Development stage two | Sat  5 Mar | Sat  19 Mar | Full integration with extending applications, additional functionality for core game mechanics |
| High level UI & level designs | Sun  20 Mar | Wed  23 Mar | Designs for interactive user interface and models. Look into third party assets or begin creating assets |
| Development stage three | Thu  24 Mar | Thu  7 Apr | Finishing of core functionality, review minor tweaks and bug lists |
| Initial testing & debugging | Fri  8 Apr | Wed  13 Apr | External reviewing on current product, formulate suggestions and opinions on improvements |
| Development stage four (Optional) | Thu  14 Apr | Thu  21 Apr | Apply appropriate user feedback to production |
| Complete report | Fri  22 Apr | Fri  6 May | Finished report, after review and feedback |

### 6.1. Control plan

The following PRINCE2 control techniques will be employed:

Highlight reports weekly until Easter and at the end of each stage thereafter (to include stage reviews at stage completion)

Weekly review meetings with project supervisor until Easter and as needed there-after, to review progress, plans and products

Risk management (see Section 7)

Communication plan (see Section 6.2)

Quality plan (see Section 8)

Exception reports and plans as necessary

### 6.2. Communication plan

Review meetings will be held with the supervisor in line with the Control plan.  
Further ad-hoc communications will take place as needed.

### 7. Initial risk list

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| Risk | **Management strategy** |
| Under estimated stage timeframe | Regular meetings with my supervisor will allow for early signs of under estimation and a reiteration of the project plan will be produced |
| Difficulty learning new software | Detailed research and evaluation will need to be completed for each piece of unknown software. Creating rough prototypes to give a better understand might be possible depending on available time. |
| Over scoped application | Regular development stages are going to be completed along with progress reports to ensure that the end scope is still possible at every stage. A review on the final product and the MVP functionality will be needed if the scope seems out of sight. |
| Creating assets consuming too much time | I am going to look into third party assets to use within the game. If this is not possible, I will need to create them taking up a lot of time and effort. Reassessing the level design and user interface to make it more simplistic would be appropriate. |
| Loss of data | All work is going to be backed up with version control to ensure that it is available on any computer and it can’t be lost with machine failure. |