

# ACCA5003-Assignment-1- Andrew-Spence-2008447

*by Andrew Spence*

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# Assignment 1 - Changemakers

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## Part 1 - Mind Map

- Game ideas
  - Cat Game
    - Genre
      - Adventure
        - Explore the neighborhood
      - Mystery
        - Solve the mystery of the Demons/Ghosts
      - Horror
        - Hold back attack from foes
    - About a stray cat
      - Trespassing
        - Random houses
        - Animal Territory
      - Steals food and gets bigger
        - Bigger it gets, its abilities change
          - Slows down, but more health
          - Starts to roll and do more damage
    - Dangers
      - Humans
      - Other Animals
      - Monsters
        - Demons
        - Ghosts
  - Tower Stacker
    - Physics
      - Tower stability
        - Wobble
        - Balance
        - Point of connection
    - Generally simple to make
      - Easier to focus on style
      - Easier to avoid bugs
    - Game of balancing items
      - More items = higher score
      - Themes could vary
        - Household items
        - Animals
        - Shapes
        - Sc-fi
  - Board Game Collections

- Pleasant Design
  - Table
  - Lighting
  - Players
- Multiplayer
  - Online
  - Coop
  - LAN
- Collection of board games
  - Chess
  - Checkers
  - Backgammon
  - Card games
    - Poker
    - Blackjack
    - Uno
    - Snap
- City Builder/Defence
  - Building
    - Camps
    - Armies
  - Resource Gathering
    - Gold
      - Trading
      - Funding
        - Buildings
        - Army
    - Stone
      - Building
      - Repairs
    - Wood
      - Building
      - Tools
      - Repairs
    - Ores
      - Tools
      - Repairs
      - Trading
  - References
    - Clash of clans
    - Balloon Tower Defence

- Tycoon Game
  - Business Management
    - Money
    - Staff
    - Products
  - Advertisement
    - TV
    - Magazines
    - News Paper
    - Internet
  - Creating products
    - Games
    - Books
    - Magazines
    - Merchandise
  - Sales
    - Stock
    - Stocks

## Aims & Objectives and Research Area

### Aims and Objectives

#### Observational Data

Collect observational data on other games that use similar mechanics and see how they work in those games. See what can be improved and what works well, and if anything would benefit from being added to those existing systems that are in place in those games.

I would need to see what kind of camera and graphical systems work best with this genre of games, to see what would be expected of a modern game in this vein. I wouldn't have to overly focus on making the graphics perfect, since the game itself with all its fresh mechanics would be the main attraction, but the game itself must have an attractive enough style to keep players playing the game.

Collecting data on how the economic systems work within the games would be a requirement, since I'd need to better understand how players interact with their resources within the game and how those resources are used. Once I understand these systems, I would be better able to expand on them myself, by adding in depth trading systems and AI that would be creating nearby towns to trade with and build up relationships with.

#### Experimental Data

I could start by making these new mechanics and testing them in a smaller version of the game, making sure the systems are balanced and aren't overly difficult. I wouldn't be able to make the game realistic to the point where it becomes a boring simulator game that wouldn't keep users engaged. A way to avoid this, is by allowing the player to control the movement of time by speeding it up or pausing it. This is a commonly used feature in games in this vein, but it prevents the user getting bored waiting, or overwhelmed by the needs their civilization would have.

I would also have to experiment with styles that are within my creative capabilities. I would likely have to go with a birds eye view, with a simple 3d style that allows the player to freely move about their environment and create their town in their vision, and experiment themselves with ideas for layouts and plans.

AI experimentation would likely be required, as it would be a strong foundation of the game's mechanics. This would be creating an AI that can manage its own resources, and grow on its own without further human input than it is originally given. This would be in cases that the AI would be aware of what is required for its growth, and to have it done in varying efficiencies to give the AI settings that would lead to the games difficulty level, which if set to the highest difficulty it would be as efficient as possible.

## Research Areas

### Computer Research

This would be used to improve the games mechanics by improving my knowledge of different methods of coding problems I come across. This could be for such issues as memory, storage and overall game performance, by optimizing the games code and assets.

### Management Research

Management is a massive part of the project and would be required for better understanding what would be required in managing a settlement and how the player would be expected to manage them. Ultimately the player can manage their settlement however they see fit, but to create this project with such a heavy emphasis on management itself, I would first need to better understand what goes into it first.

### Warfare Research

I need to better understand early warfare techniques, so I can implement units into the project that would be close to accurate representations of what the player could expect from that era of technology. For example, there could be infantry such as foot soldiers and knights, however there could also be warmachines such as catapults and battering rams.

### Infrastructure Research

When creating AI towns, I need to be able to know what layout would work for settlement infrastructures and lead to the AI running a successful area for the player to interact with. Each settlement could be more focused on one side of trade than another, or even more of a military power instead of a trading settlement.

### Economy Research

Knowing how to manage the trade in the game would be an integral part of its creation, and making sure certain trades do not become overly profitable. For example, if a player decides to become a settlement that trades a specific resource, such as cotton, the demand for cotton would decrease and would start lowering its price. This would encourage the player to manage multiple systems to switch between harvesting different resources and perhaps holding some resources in storage until prices rise once again.

### Health Research

Managing the health of the player's settlement will be a huge hurdle, and it is down to the player to be ready for anything that may come to the settlement. For example, famine and plague could easily sweep over the settlement as easily as the cold could freeze them during the winter if they're ill prepared for it and haven't collected enough firewood for the settlement.

# Research Strategies

## Similar Games

I would start my research by seeing what games are already on the market in these genres, and find out if it's possible to combine them together and which mechanics from each of them would best suit the game. The genre's I'd need to better understand are:

- City Builders (City Builder, 2022)
- Real Time Strategy (RTS, 2022)
- Trading Tycoon (Business & Tycoon Games, 2022)

Better understanding these genres and how to merge them into one project would be the key to creating a successful game, and would greatly increase the games unique feel when playing and ideally leave an impact on the market by capitalizing off the demand for a project such as this.

## History of town growth

Studying the history of towns, and how they came to be would massively help me better understand how the cities would best flow and allow me to help the players with startup tutorials showing what I learn. The main research would consist of searching what makes a good location to create a settlement, such as:

- Fertile land
- Access to Water
- Roads (If created)
- Seasonal change
- Weather conditions
- Nearby Resources

This is just a short list of things I believe would need to be considered, but more research would lead me to find far more crucial things that would need consideration when creating a settlement, and how I would go about implementing those systems into the project. (Society, 2022)

## History of warfare

I hope to understand many battles that have taken place throughout history, and see what lead to each of their victories and what was used to obtain it. I would want to better understand the different troops and machines used during wars, and the methods of using them that lead to victory. Examples being, blocking a city and preventing it from obtaining food and supplies from outside its main settlement, leading to surrender of the town.

The players can certainly attack, but at certain difficulties, so can the AI. For the AI to attack, I would need to understand different attack plans, and create the AI in a way that they can recreate my attacks and flow to other plans throughout the battle. This would mean, if the AI notices it is taking heavy losses, it can choose to retreat or attack from a different angle or with

different troops, as well as choose how to go about controlling the settle once it is captured. (GHL, 2022)

## History of economy/trade

The history of how trade worked in the earlier centuries would be a key part of the game, perhaps requiring the settlements to create better roads between towns and patrols to reduce crime along the trade routes, or even having guards travel with the trade to prevent any attempts made to steal the stock.

Better understanding how markets in settlements functioned, and whether they became social hubs of settlement or even if being a trade hub itself could lead to benefits in the surrounding area such as making the settlement a capital. (HISTORY OF TRADE, 2022)

## History of leaderships

Ideally the player can decide whatever way they'd like to manage their settlement, this could lead to some harsh treatment of the citizens in the settlement. This is why they would have a system in place that manages how much the citizens respect the player. This could be raised in various ways, such as being a kind leader, or being a feared leader. A few examples of the systems in place that would allow the player to manage their settlement are as follow:

- Democratic
- Monarchy (Monarchy History, 2022)
- Communist (History of communism - Wikipedia, 2022)
- Dictatorship (dictatorship | Definition, Characteristics, Countries, & Facts, 2022)

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FINAL GRADE

GENERAL COMMENTS

# 27

/100

## Instructor

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|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| <b>Total:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 27 |
| <b>1. Engagement with Literature Skills</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |    |
| <p><b>T1 Mind Map:</b> - No use of IEEE citations included.</p> <p><b>T2 Aim &amp; Objs, Res. Phil., Dbs &amp; search strats:</b> - No use of IEEE citations included.</p> <p><b>T3 Res. strats:</b> Use of citations and a bibliography included.</p> <p>IMPORTANT: IEEE Referencing format should be used. Lecturers will mark you down, particularly at L5 and L6 for not using IEEE in your assignments. Please find the IEEE guidebook here: <a href="https://uwtsd.ac.uk/media/uwtsd-website/content-assets/documents/library-and-learning-resources/infoskills/IEEE-eng_v.1.2.pdf">https://uwtsd.ac.uk/media/uwtsd-website/content-assets/documents/library-and-learning-resources/infoskills/IEEE-eng_v.1.2.pdf</a>.</p> | 5  |
| <b>2. Knowledge and Understanding Skills</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |    |
| <p><b>T1:</b> - No coverage of Unit 1 section 1 concepts/topics. Not supported by citations.</p> <p><b>T2:</b> - A research philosophy has not been defined and documented for the project.</p> <p><b>T3:</b> - Research strategies for data collection are not specifically selected and documented. + Relevant areas for research and investigation related to the project are clearly documented. Good.</p>                                                                                                                                                                                                                                                                                                                   | 6  |
| <b>3. Cognitive and Intellectual Skills</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |    |
| <p><b>T1:</b> + Evidence of project idea analysis is documented. - Evidence of Unit 1 section 1 concept analysis is not</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 8  |

|                                                                                                                                                                                                                                                                                                                                                                                                             |   |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
| documented.<br><b>T2:</b> - A single clear Aim and several Objectives have not been documented.<br>+ An overview of the project including key considerations and requirements is documented. Good.<br><b>T3:</b> - Relevant strategies to enhance validity, reliability, and generalisability are not documented.                                                                                           |   |
| <b>4. Practical Application Skills</b>                                                                                                                                                                                                                                                                                                                                                                      |   |
| <b>T1:</b> - No use of software to create a Mind-map.<br><b>T2:</b> - Research databases identified and search strategies used to identify relevant research related to the project area.<br><b>T3:</b> - A data collection method has not been designed or used to acquire some feedback for the project. + Some relevant research related to the project requirements has been undertaken and documented. | 5 |
| <b>5. Transferable Skills for Life and Professional Practice (10 marks for participation.)</b>                                                                                                                                                                                                                                                                                                              |   |
| <b>T1:</b> -/+ Bullet point list documented. Some good use of formatting in the document. However the assignment task questions have largely not been answered. To pass the assignment, the task questions need to be answered. OneNote Research portfolio has not been created.<br>On-time/Late: OT.                                                                                                       | 3 |

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