# Project History/Inception

Initial suggestions for games were:

* Tetris
* Platform level game
* Adventure game
* Type of centipede game (like end of yr1 project)
* Side scroller

The group agreed to produce a puzzle based game rather than a fighting game, though small elements of fighting may be ok. The idea is to produce a cheerful seasonal game.

We were advised not to do a Tetris style game. We felt that a centipede game would not be interesting enough, and that an adventure game would need a lot of work to be interesting (needing a complex story line and graphics). We therefore agreed to do a platform game, but to include puzzles.

# Project Concept

Christmas themed game, to last about 30 mins, for anyone to play.

# Project Objective/Goal

To give Tiny Tim’s family a great Christmas, and stop Scrooge from wrecking it.

At the start of the game we see Tiny Tim’s bare room. Each game level gives one stage of decoration for Tim’s house.

# Game Play

## Platform

The objective of the game shall be to fully decorate the Christmas Room.

The player shall navigate through a platform level. On the way the player shall collect a ‘key’ to allow them to reach the puzzle at the end of the level. The player may also collect items to add extra sparkle to the Christmas Room.

The levels shall increase in difficulty, with extra mechanics and different items to collect. The player may also need to defeat occasional Scrooge sabotage attempts.

Each platform level and each puzzle shall be timed. The fastest overall times shall be displayed at the end of the game in a High Score table.

## Puzzle

At the end of each platform level, the player shall complete a puzzle to collect the next item(s) for the Christmas Room, e.g. Christmas tree.

The player shall be able to manipulate the puzzle to enable the player piece to reach the target.

Reaching the puzzle target shall add the target object(s), e.g. Christmas tree, to the Christmas Room.

When the puzzle is complete, the user shall be able to see the Christmas Room with the collected items so far. The player shall be positioned at the start of the next platform level.

# Project Stages

Desired Game Features and Gameplay

| **Type** | **Platform Section** | **Puzzle Section** |
| --- | --- | --- |
| TREE | Town -> Forest  KEY: Hatchet  DOOR: Thick Forest | Forest Maze |
| DECORATIONS | Attic  KEY: Tinsel, Lights, Baubles, Stockings  MECHANIC: Moving boxes around/out of the way to find key items. | Celtic Knot |
| DINNER | Kitchen  KEY: Food items  END: Food in oven + Turn on  MECHANIC: More obstacles (harder), perhaps fire jets | Tile picture OR  Memory cards |
| PRESENTS | Night sky  KEY: Present parts:  Paper/Bow/Gift  MECHANIC: Helicopter Game; obstacles - roofs | Santa Traffic game |

# Graphics Required

The following graphics will be needed:

| **Item** | **Size** | **Scope** |
| --- | --- | --- |
| Player sprite | Small | To use when moving through platform levels |
| Tim’s room | Window | To show levels/goals being achieved. There are 5 levels to this room:   1. Bare room at start, showing bare fireplace and bare table 2. Room with Christmas tree (the tree itself is decorated) 3. Room with tree and decorations (swags, tinsel, cards) 4. As c) but the table is now laden with food, plates, glasses 5. As d) but there are now stockings at the mantelpiece and a pile of gifts |
| Collectible items | Small | To collect during platform levels; extras to display in Tim’s room, e.g. star for top of tree, special items for tree |
| Platform levels | Main display | For game play. Perhaps we could use a repeated pattern?  There are 4 levels:   1. Through a woodland scene. Bright daylight 2. Though the attic. Still brightly lit 3. In the kitchens, with indoor lighting 4. In the night sky – stars and moon, rooftops. |
| Evil Scrooge sprite or rats ? | small | May want this to provide obstacles to overcome (possible small amount of fighting) |
| Puzzle grid tile icons | Grid icon | For playing the puzzle games. Will need to identify exactly what is needed |

# Puzzle Games

All puzzle games should be grid based, so we can play be changing the icon being displayed on each grid square. Need to decide the size of grid – use same size grid for every game. Grid should have Christmassy border, and will need to see the reward associated with each puzzle.

## Christmas Tree Maze

The player needs to navigate to the Christmas tree – either from one side to the other, or into the centre (depends what looks the best). Should be able to see “your tree” in the target position. Success adds the (decorated) tree to Timy Tim’s room.

## Celtic Knot Decorations

The Christmas lights must be aligned within the Celtic knot. Success will add decorations to Tiny Tim’s room.

## Food Puzzle

There are two possibilities for this puzzle which results in the food and drink being added to Tim’s room:

1. Match the pairs: tiles are all upside down; clicking one reveals the picture; player must click consecutive tiles with the same picture gradually working through the tiles.
2. Lay the table, slider puzzle: There is one square with no tile. The player must slide tiles up/down, left/right to re-arrange into a properly laid table.

## Santa Traffic Puzzle

The player needs to slide the traffic pieces around one at a time to move them out of the way so that Santa’s sleigh can escape the gridlock.

# Tasks

In no particular order:

1. Design platform engine, to handle each platform level
2. Design puzzle engine, to host each puzzle game
3. Design platform levels – obstacles and assists/mechanics
4. Draw:
   1. player sprite/icon
   2. Christmas Room scenes (bare, with tree, with decorations, with food, with gifts)
   3. Extra Christmas items
   4. Platform components/background
   5. Puzzle tiles
5. Design puzzle games
6. Check “shall” statements
7. Produce Use Case Diagrams
8. Produce Test cases