# The Game

Your task is to invent and implement a platform jumper game. A platform jumper is a style of game that presents a side view of a 2D character, controlled by the player. The character moves across the screen to a given goal, typically meeting obstacles and challenges.

Your game should have a theme and a story. It should include interesting tasks, obstacles and challenges, original graphics and some sound.

# 1 Design your game

Invent a game idea with a good character, strong story, and interesting challenges. Often, it is hard to judge how much you can achieve, or how difficult to make it. To deal with this, sort your functionality into groups:

* core functionality (what you definitely want to achieve)
* advanced functionality (what you hope to achieve if things go well)
* nice-to-have functionality (what you will do if you have time left)

# 2 Do some research

Look into other information that may help you. For example, look at some existing platform jumper games for ideas. Look at existing code (e.g. the Greenfoot video tutorials or the Greenfoot book) for help with coding. Know what there is out there to help you. Remember: You can use outside resources with proper attribution. You must not use ideas or code from elsewhere and pretend it is your own. That would be plagiarism.

# 3 Design your class structure

Decide what classes you should create to represent the objects in your game. (This may be refined later as work continues, but a first cut can be made now.)

***The results of steps 1-3 will be demonstrated prior to continuing with the rest of the project. Once it is approved you will be allowed to continue.***

# 4 Implement the Game

Begin to implementing your game. Do this step by step. Test as you go along.

# 5 Tasks

The base functionality that you have to implement is:

* The game has a main character that is controlled by the player.
* The game character moves across the screen from a start position to a target position, by walking, running, jumping, falling, etc...
* There are several obstacles in the game. They may be other characters or things.
* The player can find ‘goodies’, things that are good for the player (either give strength, or special abilities, or points, or something).

Points Points

Earned Possible

Program works and meets specifications \_\_\_\_\_ 35

Main character control (15)

Jumping

Falling

Realism/Physics

Obstacles (5)

Challenging yet achievable

Goal (5)

Challenging yet achievable

Interesting

Overall Gameplay/Look/Feel (10)

Coding \_\_\_\_\_ 30

Class Structure (5)

Encapsulation

Cohesion

Coupling

Method Modularization (5)

Format (5)

Commenting

Readability

Explanations (15)

Extras \_\_\_\_\_ 35

A.I.

Graphics

Animation

Goodies

Other ???

TOTAL \_\_\_\_\_\_\_ 100