Product Brief: Heslington Hustle

You wake up in your student accommodation. It is Monday morning and you are still sleepy. It comes to your realisation that this is your last week until exams begin! Trying not to panic, you think about today, and how to best manage your day with a healthy mix of studying, taking care of yourself and sleeping. Yes, you do need sleep, even if you are hesitant to admit it!

You are to build a single-player game that requires managing the activities performed by a second year computer science student the final week before their exams are to begin. Specific features include:

- You will be controlling the avatar of the student, who will move around the map and interact with various objects. The control scheme should allow for:
    - Moving the avatar around the map.
    - Interacting with what is in front of them (for example the CS building to study, the Piazza building to eat, or the student accommodation to rest).

- The game will last 7 days. During each day you will be able to perform a limited set of activities before you either run out of time or energy to do more. The day will end when you go to sleep. The game will end when the 7th day (Sunday) is over.
    - Even though the game will have no real-world time limit for being played, it is expected to last around 5-10 minutes for a typical player.

- Your primary objectives are:
    - Ensure you have studied enough for your exams. This is achieved by studying (for example by interacting with the computer science building) at least once every day. If you miss a day, you can catch up by studying more than once on some other day (but you are only allowed to do this once per game).
    - Ensure you take some time for yourself. This is achieved by interacting with various recreational activities (like going to the sports centre, spending some time at the lake feeding ducks, etc).
    - Ensure you have enough rest every day. This is automatically achieved by sleeping at the end of each day, but it also means that after you run out of energy to do more things, even if it is early during the day, you will be unable to do anything else!

- Your game must contain:
    - A map to move around in. This should be a map containing at least some of the Heslington East campus (CS building, student accommodation building, Piazza building, etc.), and can optionally contain activities outside campus (like going to town, by placing these activities at its edges, for example).
    - At least one place to study, for example the CS building or the university library. Maximum 2 places.
    - One place to sleep, for example a student accommodation building.

- ○ At least three places to perform recreational activities either within campus or nearby (within York). Such activities can be spending time relaxing by the lake and feeding the ducks, going to the sports centre, going to town to watch a movie, spending time in your room (not sleeping), going to the pub or going for a walk. Maximum 6 places.
    - ○ At least one place to eat, for example the Piazza building, or restaurants in town. Maximum 3 places.

- You win the game if you pass your exams (denoted by a score achieved in the game over screen). You pass your exams if you have studied enough (as discussed above), but you get a higher score the better you do in your exams! This can be achieved by:
    - ○ Studying in different places over the various days (if your game has more than one place to study).
    - ○ Studying more than the minimum requirement of once a day, but not overdoing it! For example your game could give a higher score if the student studies 8 to 10 times over the week but start reducing their score if they study 11 or more times, denoting them being overworked!
    - ○ Eating at reasonable intervals. For example the score could be increased if the student eats breakfast, lunch and dinner, instead of just once a day.
    - ○ Ensuring the student spends time for themselves. Doing a mix of recreational activities every day should increase their score.

- Each activity will consume a varying amount of your two available resources: time and energy.
    - ○ Each day contains 16 hours (and the rest will be used when you sleep after you end the day).
    - ○ Each day the student has an energy bar/capacity.
    - ○ Performing an activity will move time forward by X hours, depending on the activity.
    - ○ Performing an activity will consume X% of the energy the student has for the day, depending on the activity.

Constraints

You are building a game that should be playable and enjoyable by your cohort. However, there is a stakeholder that you must also accommodate.

The customer: one of your lecturers will play the role of a customer who is interested in eventually trying to market and sell your game. Ultimately the customer is the person you must convince of the validity of your assumptions and decisions. This stakeholder can be contacted as often as you need and at any time (but do not expect an instant reply!).

Use of 3rd-Party Libraries, Tools and Assets

You are encouraged to use appropriately-licenced (see the Intellectual Property lecture for details) 3rd-party libraries (e.g. a game engine like libGDX or jMonkeyEngine, a JSON/object mapper library if you need to store structured data), tools (e.g. graphical level/map editors) and assets (e.g. images, textures) where possible, instead of implementing everything from scratch.

Assessment 1

For Assessment 1, you are only required to implement one of each interaction/activity location (one place to sleep, one place to study, one place to eat, one recreational activity), a tracker of the 7 days the game lasts (with a way of moving to the next day, and the game being over after the 7th day), and a simple counter denoting how many of each activity has been performed so far.

Assessment 2

For Assessment 2, you are required to implement the full product brief.