

UNIVERSITY OF YORK

DEPARTMENT OF COMPUTER SCIENCE

User Evaluation

## **Group 15 - HesHus**

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a) Our method for evaluating our game was using Task Based User Evaluation (TBUE). Testing on users instead of doing it ourselves gives us an idea of how our target demographic would interact with the game, along with the advantage that the users we test on are unfamiliar with our game whereas we know how it's supposed to work.

### **Participant Recruitment:**

Our target audience for this game is prospective university students for York, aged around 17-18 years old. Due to our project constraint of picking people within our cohort, we were limited to current students, already familiar with York, aged around 20 years old. Although slightly different from the target audience, this difference is minimal so users we recruited were great for the task. During an in-person practical session, we identified 7 people, of which were not part of our team, to test our game. We picked 7 people as this is the same as the number of people in our group, and would give us a good range of feedback.

We showed these people an Information Sheet, containing an overview about what they will do: the type and amount of tasks, duration and how we will store their data to preserve confidentiality. They then agreed to this on an Informed Consent form using Google Forms- as it is easy to create and use.

### **Task Definition:**

As a team, we discussed the best sequence of tasks for our users to complete. We tested this ourselves to confirm the evaluation wouldn't take longer than 15 minutes. This sequence of tasks was tailored to incorporate most, if not all, of our game's features including resulting in various scores and streaks, depending on how they chose to play - so we could gain feedback on everything we could.

### **Preparing the Environment:**

The environment we conducted the evaluation in was a slightly busy computer room, which would replicate the context in which our target audience would play the game in (an open day with lots of other people around).

### **Data Collection Tools and Data Procedures:**

We completed our evaluation by sitting down, one-on-one, next to the participant, observing them following the tasks set while playing the game. We collected our data using a variety of tools and procedures:

***Thinking aloud (Concurrent Verbal Protocol)*** - We encouraged the participant to constantly tell us what they were thinking to give us insight into the decision making process of the game. This also enabled us to identify problems easier - which we then asked what the perceived severity of that problem was.

***Hypothesis test checklist*** - We created a list of hypotheses to check what the user was able to do. We used this to interview the participants afterwards - we asked about their awareness, understanding and execution of different features- to understand their 'mental model' of the system (their understanding of how the system works). This method works specifically well for games as there were some features that can't be tested through a set of tasks (e.g. 'The player was able to keep track of how much energy they had').

**Usability Scales** - problems identified from thinking aloud were assessed with a 5 point likert scale (Not severe to severe), giving us insight into what future design changes are needed

**Usability Scale Table**

No	Description of the usability problem	P1	P2	P3	P4	P5	P6	P7	Total
1	Unclear on where different locations are			3	4			3	10
2	Can't 'talk about exams' - due to randomness of tasks			2	3			4	9
3	Day number not clear enough			1					1
4	Leaderboard can't be checked at the start - only at the end	1		2					3
5	Unclear how to write name for leaderboard - thought they had to click something first (no input bar)				4				4
6	Diagonally walking is faster					1			1
7	Gets lost on first play					3			3
8	Screen tearing	2				1			3
9	No backspace leaderboard, leaderboard no scores	2				4		4	10
10	Achievement text misaligned					1			1
11	Clearly label recreational (ducks)						1		1
12	Unclear why eating requires energy				1				1
13	Streaks not working/not evident at all			4	4				8
14	Things feel too far away from each other				1				1
15	Visual writing on the signs without clicking them would be nice				2				2
16	Signs are unclear and some signs do not have interactions	3							3
17	Sign blocks interaction on piazza building	2							2
18	Fishing and feeding the ducks rec. activity not clear how many hours each would take or how each would take or how much energy	2							2
19	Ducks activity no sign, maybe to move the signs around, like the lake signs	1							1
20	Fishing is a bit out of the way and might not be able to find it easily, or might miss it completely		2						2
21	Energy consumption is quite high for all activities in general so cannot do enough in a day, meaning you could wake up eat and study and do one rec activity and be out of energy		4						4
22	Not clear incentive or guidance on how many times to do things		1						1
23	Total score is unclear and too general		1						1
24	Wrong sign on the fishing activity							1	1

25	No sign on ducks activity							2	2
26	Could wake up eat and study and do one rec activity and be out of energy		2						2