*Speed Racer: Racing Legends*

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2. *Study Design*
   1. **Purpose**

Speed Racers’ purpose for conducting the upcoming tests are the following.

We needed users to interact with actual game play mechanics. These mechanics involve accelerating, steering, and navigating the course. These are all part of the controller experience.

Steering will be the highest priority because this will more than likely have the highest degree or variance between the mechanics. Many people play games with controllers and others keyboards. So being used to one or the other may give a slightly different response. Even when users are already familiar with what they are being tested on, there is always a sensitivity variance. Not all keyboard and mouse users play at the same sensitivity. The same theory applies to controllers as well. By gathering the information from this we can decide what to adjust in terms of sensitivity based off the data collected.

Accelerating takes a lower priority simply because it impacts the user less throughout gameplay. While still important, we will use the data to help us again adjust what the default speeds will be if needed. These first two mechanics are important because one does effect the other. They will always be bound together because you cannot steer if you are not accelerating (moving). While you can accelerate without steering in theory, we have no straight away or drag strip maps, so you must steer eventually.

The last purpose of testing is navigating the course. To get through the course you need to control the car and hit objectives we have laid out for the test. We want to make sure the objectives are reasonably obtainable and because of placement make sure that visually they are apparent.

All these combined make up our testing purpose and will provide excellent and detailed data for us to make some normalized changes if we did not get it right the first time.

* 1. **Concerns and Goals**

1. Concerns:

* Sensitivity of the controls while racing
* Acceleration
* Navigation of course

1. Goals:

* Sensitivity

1. To achieve a desired sensitivity based off the data. Using the testing process to decide what it should be set at by default.
2. The user will be able to adjust this if the default is not to their liking.

* Acceleration

1. To have a steady acceleration that is pleasant and engaging for the user. Too fast and it can go out of control, too slow and can seem sluggish for getting started.

* Navigation

1. To have objectives be 100% visible
2. To have objectives be easy to gather

* 1. **Tasks**

Since having step by step tasks in a constant gameplay would not quite be productive, our task list will be short.

1. Start Racing on map
2. Map will have objectives for tester to drive through
3. The goal will be to try and drive through as many of the objectives as possible between the start and finish line
4. Will have as much time as needed
5. Once race is completed that ends the gameplay.
   1. **Scenarios**
6. Caroline just got out of class. She has eaten lunch already and has no homework to really do immediately. However, she cannot leave campus because she has another class in 20 minutes. So she decides to kill some time playing a game. She chooses Speed Racer: Racing Legends, which she has a demo of on her laptop in her backpack.
7. Jakob is a racing game addict. He plays a ton of them, whether they be console, PC or mobile. But Jakob isn’t always at home to have access to his console and playing mobile games gets a little boring sometimes because the screen is barely as big as his hand. The new Speed Racer: Racing Legends has caught his attention and he decides to give it a try because he always has his laptop on him.
   1. **Measurements**

The measurements being used in the test cases are quantitative and qualitative. As the tester progresses through the simple task, they will be timed on how long it takes them to get to the racing gameplay. Then how long it takes them to finish the objectives set before them.

After racing is complete their experience and opinions will provide us with the qualitative data.

* Quantitative

1. How long it takes the participant to complete the map.
2. How many objectives were obtained in the test
3. How many questions are asked before and during gameplay.

* Qualitative

1. User opinion on completing the map & objectives
2. Ease of objectives individually
3. Ease of overall completion
4. User opinion of Controls
5. Driving controls
6. Acceleration Controls
7. What commands were not clear
8. Questions that were spur of the moment
9. Asking to pause to get a better understanding
   1. **Test Method**

Between the three test methods diagnostic, comparative and validation, our team will be exclusively implementing validation testing. We are specifically testing the functionality of our game and hoping to fine-tune it to the biggest factor of normalization. In other words, the most comfortable control settings and user experience will be provided by default to appeal to the largest amount of people to casually experience our game.

We feel that our goals have been met in terms of design and we already have agreed upon what is coming out. Therefore the other two tests are not necessary.

The target population of the test will be towards anybody who feels they are either a casual or seasoned gamer. Based off this we can gather detailed information for sensitivity settings from people who are actually exposed or used to how controls feel for different games.

The testers will be our team leader and one member of the design team. They will be together to ensure everything runs smoothly. They will use the same testing machine for each individual they choose in order to be consistent. A brief introduction will be made. Next the participant will be informed of the controls used to play the game as to be clear as to how they should operate the controls. After starting and stopping the gameplay we will then ask a series of questions to gather information on their gameplay experience.

We will monitor the gameplay experience of each participant. When asking them about their experience with our controls we will match up what they say to how it looked like they were doing (easy time, or difficult time).

1. Study Script
2. Greeting and Proposition

* Hello, how are you today?
* Would you be interested in trying out a demo of our new racing game?
* We are interested in testing out our control settings for a broad range of users
* You will just need to complete one map with a handful of objectives, should take no longer than 5 minutes and a couple of questions afterwards

1. Preliminary interview

* Awesome, we appreciate the help!
* Do you have any experience playing video games? They do not necessarily have to have been racing ones.
* Have you played more console games or PC games?
* How long would you say you have played games?
* Do you feel comfortable using a keyboard to play a game?

1. Providing instructions

* Once we load the game for you, there will be a start button.
* Once clicked you can start your race
* Once the race starts there will be 17 objectives between the start and finish line. We would like you to try to get as many as possible
* As well as try to stay on the road as much as possible.
* Any questions? (Wait to see if they ask for controls)
* The controls are

1. W is to accelerate forward
2. S is to reverse
3. A and D are used to turn left and right
4. You can also use the arrow keys on the keyboard if you prefer

* Last minute questions?

1. Conducting the Test

* Time the participant as they start the map.
* Be sure to give them help if they ask for it during the game.
* Be hands off otherwise
* Monitor the amount of objectives missed.
* Use our “Tester Form” to fill out these topics for our data.

1. Debriefing the Participant

* All done! How did that go for you?
* Do you mind if we ask a couple of questions to finalize our research?
* How did the controls feel?
* Can you give us specifics on the acceleration?
* Can you give us specifics on the turning?
* Would you increase or decrease the sensitivity?
* Did you see the objectives clearly?
* Between those three things do you have any recommendations for us?
* Or concerns?
* Thank you for your time, have a good day.