

Free Skies

The sky is not the limit, but your playground

Autism Virtual Reality Project

Test Plan

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1 Introduction

1.1 Background

The main focus of Free Skies is to help educate students in the field of psychology on the specifics of Autism. This application will provide hands-on learning in the form of a Virtual Reality experience. The trainees will be able to view interactive 360 videos to help them learn and identify different symptoms of Autism, as well as how to approach them. Each trainee will have their own login accounts, which will contain their work progress and ways to communicate with their trainer. The trainer is someone that already has experience and knowledge in the world of Autism treatment. The trainer will also have a login account that will contain the progress of each trainee and a way to communicate with them.

1.2 Objective

The test plan will discuss the different application features of Free Skies and their functionalities. It will describe different test cases for each feature and their expected outputs when these test cases are presented. It will also discuss the strategy that will be used when conducting the test cases.

2 Strategy

The strategy for testing each feature is to set up different focus groups to test the application. There will be a trainee focus group and a trainer focus group to test out the functionality on both ends. Extensive test will be done on the backend portion of the application. For example, saving trainee progress for each trainee.

3 Application Features

3.1 Trainee Features

3.1.1 Trainee Plan

Contains different modules for the trainee to complete for their training. This plan is assigned by the trainer based on the trainee's skill level.

3.1.2 Grading System

Shows the trainee how well they did on their modules and skills they need to work on.

3.2 Trainer Features

3.2.1 Trainee Information

Shows the names of the trainees assigned to the trainer, the progress of each trainee, and feedback that the trainee has written.

3.2.2 Overall Scores

The trainer will be able to see the overall scores for each module. This will help them determine how many trainees are struggling with a certain topic.

3.3 Frontend Features

3.3.1 Login Page

This page will give the trainees and trainers the ability to create a username and password for the application. This page will also give previous users the ability to have access to their information when logged in.

3.3.2 Feedback Section

This feature will allow both the trainee and trainer to give feedback on modules. For example, the trainer will be able to tell the trainee what they need to work on.

3.4 Backend Features

3.4.1 Database Storage

3.4.1.1 Individual user file for trainee

Contains the progress for each module that the trainee completed, which modules are incomplete, the name of the trainer assigned to the trainee, all the feedback the trainee has received, and all the feedback the trainee has written.

3.4.1.2 Individual user file for trainer

Contains the names of trainees that the trainer is in charge of.

3.4.1.3 User login information file

Contains username and password for the trainee's and trainers.

4 Test Cases

4.1 Trainee Tests

4.1.1 Trainee Plan

Scenario	Expected Output
Mark logs in to his trainee account on Free Skies to do his next module. He clicks on the next module.	The module should prompt Mark to put on his VR headset. Once on, the VR headset should load the module and Mark should be able to look around the 360 environment.

4.1.2 Grading System

Scenario	Expected Output
Grace wants to review topics that she needs improve on. She knows that module 4 gave her the most trouble. So, she goes back to the grading section to see what she should work on.	Once in the grading section Grace should be able to see the topics that she had the most problems with.

4.2 Trainer Tests

4.2.1 Trainee Information

Scenario	Expected Output
Dr. James logs in to his account on Free Skies to find out how many trainees he is charge of. Once logged in he clicks on the Trainee Info section.	Dr. James should be able to see all the names of his trainees. He should also be able to click on each trainee's profiles.

4.2.2 Overall Scores

Scenario	Expected Output
Dr. Gadaire wants to view the overall scores for module 3 for all her trainees. She goes to the modules section and clicks on module 3.	Dr. Gadaire should be able to see a section with the overall scores for all her trainees. It should show the highest score, lowest score, mean score, and the most commonly missed topics.

4.3 Frontend Tests

4.3.1 Login Page

Scenario	Expected Output
Dr. Heart wants to login to her Free Skies account. So, she loads up the application.	She should see the login in screen, where she can enter her username and password.

4.3.2 Feedback Section

Scenario	Expected Output
Betsy, a trainee, has just completed her third module for the week. It was much harder than the first two that she did previously. So, she decides to leave a question in the feedback section of the module for her trainer. She types the message and clicks the 'save and publish' button.	The application should save the question left by Betsy. Then when the trainer logs in to their account, they will be able to see this question in the feedback section of the module.

4.4 Backend Tests

4.4.1 Database Storage

4.4.1.1 Individual user file for trainee

Scenario	Expected Output
Robert just finished module 2 in his Trainee Plan and has begun module 3.	The application should flip the completion flag in Robert's file.

4.4.1.2 Individual user file for trainer

Scenario	Expected Output
A new trainee was recently introduced to the Free Skies application and assigned to one of the specialists at The Scott Center for Autism Treatment.	The name of the trainee should show up in the file made specifically for the trainer.

4.4.1.3 User login information file

Scenario	Expected Output
A new trainee has joined The Scott Center for Autism Treatment. They open the Free Skies application clicks on register as a new user. They type in their information, such as their name, username that they prefer, and password. Once they are done, they click the 'create profile' button.	The application should immediately add the trainee's username and password to the database that contains all usernames and passwords.