Use Cases:

- Generate Celestial Body
- Generate Natural Satellite
- Select Stellar Model
- Select Orbital Settings
- Save Simulation
- Inspect Feature

Generate Celestial Body
Basic Course: On the Next Gen Planet Simulator Page, the user will be generating the Celestial Body; that can be any gravitational mass, such as planets, asteroids, comets, and brown dwarfs. The user will have to choose from different physical properties to generate the Celestial Body of their own choice. The user clicks the Generate button, then the system generates the Celestial Body.
Alternate Course: ***The user does not select any physical properties:*** An error message appears above the Generate button showing that "Please select one or more Physical properties to generate your Celestial Body."

Generate Natural Satellite
Basic Course: Apart from generating the Celestial body, the user will also have the option of generating the Natural Satellite of their Celestial Body. The user will have to choose from different physical properties to generate the Natural Satellite of their own choice. The user clicks the Generate button, then the system generates the Natural Satellite.
Alternate Course: ***The user does not select any physical properties:*** An error message appears above the generate button showing that "Please select one or more Physical properties to generate your Natural Satellite."

Select Stellar Model
Basic Course: User will have the option to select the Stellar model if they want to view the internal structure of the Celestial body they have created. This feature will allow the users to visualise the properties of internal structure of a celestial body such as thermodynamic input and the lighting.
Alternate Courses: ***The user picks up the Stellar Model which does not exist:*** If the user picks up the Stellar Model which does not exist then the error message will pop up on the screen.

Select Orbital Settings
Basic Course: User will have the option to adjust the angle between the axis of rotation and stellar model's north pole for their Celestial body. The user selects the "Orbital Settings" option from the toolbar. The system will show a window from which user will be able to choose from different angles.
Alternate Courses: ***The user enters the invalid input:*** *If the user enters an invalid input then error message will pop up on the screen.*

Save Simulation
Basic Course: User will have the option to save the Simulation.The user selects the "Save" option from the toolbar. The system will show a window to let the user choose a name for the file that the Simulation will be saved in.
Alternate Courses: ***The user trying to save Simulation when it does not exist:*** If there is no Simulation available to save off, error message will be prompted saying that "No Simulation Available". ***The user is trying to save a simulation that already exists:*** If the user will try to save the Simulation which already exist in the system then the system asks if the user wants to rename the file or replace the old one.

Inspect Feature
Basic Course: User will select the inspect feature of the Celestial body from the Inspection mode option. There will be different options of physical phenomena of the simulation. It will saw the description of what that feature is and why it occurs in nature such as Van Allen belts, volcanoes, craters, Van Allen belts etc.
Alternate Courses: ***The user enters the invalid input:*** If the user enters an invalid input then error message will pop up on the screen.