Test plan
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Individual project

ID	UC	Precondition	Test data	Expected result
TC-01	G-01: User logs into the system	User is at the login screen	Username: TestUser Password: 123456Aa	User is successfully logged in
TC-02	G-01: User logs into the system	User is at the login screen	Username: NonExistingUser Password: 123456Aa	"Credentials did not match" message is displayed
TC-03	G-02: User views space object data	User is logged in, on desktop app	Selects: Hubble Space Telescope	Hubble space telescope information is displayed

TC-04	G-03: User views space object data	User is logged in, on website	Clicks: Satellites tab Selects: ISS	ISS information is displayed
TC-05	G-04: User views object details	User is logged in, on website	Clicks: Satellites tab Selects: ISS Clicks: Details	ISS detailed information is displayed
TC-06	G-04: User views object details	User is logged in, on website	Clicks: Satellites tab No object available	Details page is inaccessible
TC-07	G-05: User searches for an object	User is logged in, on desktop app	Inputs: hub	List of matches containing "hub" is displayed

TC-08	G-06: User changes object view	User is logged in, on desktop app	Selects: Hubble Space Telescope Clicks: Blueprint View	Hubble Space Telescope blueprint view is displayed
TC-09	G-06: User changes object view	User is logged in, on desktop app	No object selected Clicks: Blueprint View	"Not Available" picture is displayed
TC-10	G-07: User edits profile	User is logged in, on website	Clicks: Profile Changes details: Name: TestNew Clicks: Save	Changes are saved, Name is TestNew
TC-11	G-07: User edits profile	User is logged in, on website	Clicks: Profile Changes details: Email to abc12 Clicks: Save	"Invalid Email" message is displayed

TC-12	G-08: User views map of objects	User is logged in, on website	Clicks: Map tab	Map with objects is displayed
TC-13	G-09: User recovers password	User is on the login screen	Clicks: Forgot Password Inputs: Admin@gmail.com	Recovery email is sent
TC-14	G-09: User recovers password	User is on the login screen	Clicks: Forgot Password Inputs: invalidEmail	"Email address is invalid" message is displayed
TC-15	G-09: User recovers password	User is on the login screen	Clicks: Forgot Password Inputs: abc123@gmail.com	"No account registered with this email" is displayed

TC-16	AD-01: User adds a new employee	Logged in as administrator	Input: FirstName: TestName LastName: TestName, Password: Pass1234 BirthDate: 01/01/2001 Email: test@mail.com Click: Add	New employee is added
TC-17	AD-01: User adds a new employee	Logged in as administrator	Input: Input: FirstName:1 LastName: 1, Password: password BirthDate: 01/01/2024 Email: test@mail.com Click: Add	Errors given: "Invalid First Name", "Invalid Last Name", "Password is too weak", "Invalid Birth Date", "Email already exists"
TC-18	AD-02: User removes an employee	Logged in as administrator	Select: TestName Click: Remove	Employee is removed

TC-19	AD-03: User views user statistics	Logged in as administrator	Views "Users" section	"Users" statistics are displayed
TC-20	AD-04: User edits user data	Logged in as administrator	Click: Edit users Select: TestName Edit: TestName Click: Save	User data is updated
TC-21	AD-04: User edits user data	Logged in as administrator	Click: Edit users Select:TestName Edit: FirstName: 1 Click: Save	"Invalid Data" message is displayed

TC-22	EM-01: User adds a new space object	Logged in as Employee	Click: Add Satellite Input: Model: "XP34" Objective: "Telecomunication" Launch: empty default Manufacturer: "NASA" Name: "ISSD" Size: 110 Mass: 419455 Position: (0,0,0) Velocity: (0,0,0) Orientation: (1,0,0) OrbitType: GEOSTATIONARY Click: Add	Confirmation of success is displayed. Orbital data calculated is: Inclination: 0.94585470763565316 LongitudeOfAscNode: 1.5707963267948966 SemiMajorAxis: 12748.533533968666 TrueAnomaly: 1.460963750542158
TC-23	EM-01: User adds a new space object	Logged in as Employee	Click: Add Satellite Input: All or some fields empty Click: Add	"Invalid data" error message is displayed
TC-24	EM-02: User removes a space object	Logged in as Employee	Click: Edit Objects Select: "ISSD" Click: Remove	Confirmation message is displayed

TC-25	EM-02: User removes a space object	Logged in as Employee	Click: Edit Objects No Object selected Click: Remove	"No object selected" error message is displayed
TC-26	EM-03: User edits a space object	Logged in as Employee	Click: Edit Objects Select: "ISSD" Edit: Size: 122 Click: Save Changes	Confirmation message is displayed
TC-27	EM-03: User edits a space object	Logged in as Employee	Click: Edit Objects Select: "ISSD" Edit: Size: null Click: Save Changes	"Invalid Data" error message is displayed

| TC-28 | GU-01: User creates a guest account | None | Navigate: Register page

Input: FirstName: TestName
LastName: TestName,
Password: Pass1234
BirthDate: 01/01/2001
Email: test@mail.com
ProfilePictureURL: https:// imgs.search.brave.com/ tyZB0q35Aco0oc4LtOe GSkL3iuEJUPVGCnoTm T4Kk5w/rs:fit:1200:1200: 1 /g:ce/aHR0cHM6Ly9yZ W1l /emNsYS5jb20vd3At/Y2 9 udGVudC91cGxv/YWRz Lzl wMjA vMDgv/R2V0dHlJbWFnZ XMt/NTYwMTczOTcuanBn

Click: Create Account | Account is created |

TC-29	GU-01: User creates a guest account	None	Navigate: Register page Input: FirstName: TestName LastName: 0000, Password: weak BirthDate: 01/01/2024 Email: test@mail.com ProfilePictureURL: Click: Create Account	Errors given: "Invalid First Name", "Invalid Last Name", "Password is too weak", "Invalid Birth Date", "Email already exists", "Profile Picture URL is required"
TC-30	GU-02: User deletes guest account	None	Navigate: Profile page Click: Delete account Confirm: Yes	Account is deleted, user is logged out
TC-31	GU-02: User deletes guest account	None	Navigate: Profile page Click: Delete account Confirm: No	No changes occur

TC-32	EM-04: User calculates the minimum path from a communication satellite from another	Logged in as Employee	Navigate: Communications forms Input: ISDD; PIX-6	Travel list: ISSD; COM-1; Zamolxis; PIX-6

Testing Non-Functional Requirements

TC-33	NFR-01: Remote Access	None	Actions: 1. View the page in the website: https://i501909.luna.fhict.nl 2. Run the desktop app on the computer 3. Log in to your personal account or create an account	Expected results: 1. Completed 2. Completed 3. Completed

TC-34	NFR-02: Performance	Any user logged in	Actions: 1. Reload content page with no significant delay. 2. Navigate the application with no delay or lag	Expected Results: 1. Completed 2. Completed
TC-35	NFR-03	None	Review: 1. Code applies the Open-Closed principle in class structure. 2. There are methods present for small actions, that can be used in complex functionalities 3. Class structure respects the SOLID principles of OOD.	Expected Results: 1. Checked 2. Checked 3. Checked

TC-36	NFR-04	Not logged in	Actions: 1. In the link of the webpage, add "/Satellites". Log in page is displayed instead. 2. Registering an account uses secure salting and hashing for the password 3. Logging in with wrong credentials is not accepted.	Expected results: 1. Completed 2. Completed 3. Completed
TC-37	NFR-05	None	Review: 1. User interface is intuitive and simplistic, on any device	Expected Result: 1.Checked