Use case 1: Create a Science Plan

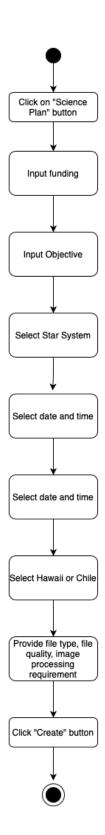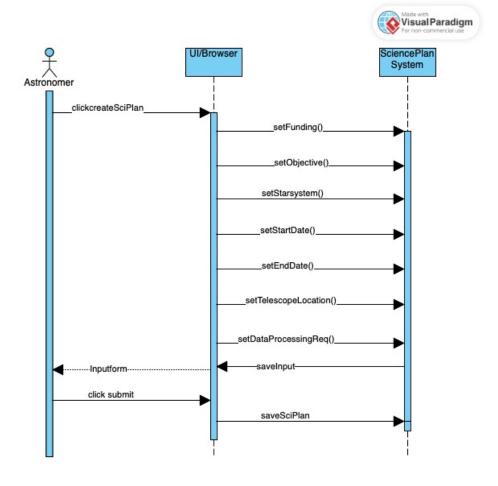| Use Case Name: Create a Science Plan	ID: 01	Importance Level: High
Primary Actor: Astronomer		Use Case Type: Detail, Essential
Stakeholders and Interests: Science observer		
Brief Description: This use case enables astronomers to create detailed science plans.		
Trigger: Science plan is created as the initial planning process. Type: External		
Pre-conditions: 1. The Astronomer must be logged into the Gemini project system. 2. The system should be fully operational and accessible online.		
Normal Flow of Events: 1. The astronomer selects create science plan button. 2. The astronomer proceeds to input funding into the funding section of the form 3. The astronomer inputs the science plan objective into the objective part of the form. 4. The astronomer selects a star system in the star system part of the form. 5. The astronomer selects an available date and time for the telescope in the schedule part of the form. 6. The astronomer selects either Hawaii or Chile in the telescope locations section of the form. 7. The astronomer provides file type, file quality, image processing requirement 8. The astronomer clicks a button called "Create".		
Post-conditions: 1. The newly created science plan is stored in the Gemini project system. 2. Astronomers have access to the finalized science plan.		

Activity Diagram

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   ┌─────────────────┐
   │ Click on "Science│
   │   Plan" button  │
   └─────────────────┘
            │
            ▼
   ┌─────────────────┐
   │  Input funding  │
   └─────────────────┘
            │
            ▼
   ┌─────────────────┐
   │ Input Objective │
   └─────────────────┘
            │
            ▼
   ┌─────────────────┐
   │ Select Star System│
   └─────────────────┘
            │
            ▼
   ┌─────────────────┐
   │Select date and time│
   └─────────────────┘
            │
            ▼
   ┌─────────────────┐
   │Select date and time│
   └─────────────────┘
            │
            ▼
   ┌─────────────────┐
   │Select Hawaii or Chile│
   └─────────────────┘
            │
            ▼
   ┌─────────────────┐
   │ Provide file type, file│
   │  quality, image  │
   │    processing    │
   │   requirement    │
   └─────────────────┘
            │
            ▼
   ┌─────────────────┐
   │ Click "Create" button│
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```

Sequence Diagram

Primary Actor: Astronomer	**Use Case Type:** Detail, Essential

Stakeholders and Interests: -

Brief Description: This use case will allow astronomers to submit a science plan

Trigger: Astronomers want to submit a science plan.

Type: External

Pre-conditions:
The user must create a science plan.
The user must test a science plan.

Normal Flow of Events:

1. The astronomer searches for a tested science plan that wants to submit to the Science. observer.
2. If the astronomer clicks add science plan,
   2.1 If it is success the system will add the science plan to a submitted list.
   2.2 If it is not success the system will notify the error message.
3. The system changes the status of science plans to "submitted"
4. The system will notify the science observer about the newly submitted science plan(s) viaOCS.

Post-conditions: Notify status of a science plan to astronomer.