

Project: Lunar Lander (Rough Draft)

SEIS-610, Analysis Play

Cast

Human Character	Program Character Name	Role	Notes
Michael	Pilot	Pilot	Real person
Gabby	Director	Flight Director	Real person
Rebecca	Mother	Controller	In charge of all software operations
Judith	Computer	Math Calculations	
Patrick	Operator	Internal Communications	
Gonzalo	Artist	External Output	External Output
Rosita	Magellan	Navigation	Navigation
Scott	Engineering	Engine Control	Engine Control
Elsa	Clerk	File and Persistent Storage	

ACT 1

This act begins with Gabby, the flight director, very worried about a successful landing which would lead to successful deployment of the lunar rovers. Gabby decides it is important for the pilots to practice landing a space craft on the moon. Gabby has had the same computer on the spacecraft setup to be a simulation in her off. Gabby begins the process...

Director: Mother, I would like to prepare for practice.

Mother: Artist, please show the director what parameters are available to configure for a practice run.

Artist: Director, you may configure spacecraft mass in kilograms, fuel mass in kilograms, gravitational pull in meters per second², initial velocity in meters per second, Fuel Burn in kilograms Per Newton Per Second, initial altitude from the moon.

Director: Mother, please set spacecraft mass to 10000kg.

Mother: Clerk, please store a spacecraft mass of 10000kg.

Clerk: Mother, this is done.

Director: Mother, please set the fuel mass to 5000kg

Mother: Clerk, please store a fuel mass of 5000kg

Clerk: Mother, this is done.

Director: Mother, please set the gravitational pull to 1.62 M/s²

Mother: Clerk, please store the gravitational pull to 1.62 M/s^2

Clerk: Mother, this is done.

Director: Mother, please set the initial velocity to 0 M/s

Mother: Clerk, please store the initial velocity of 0 M/s

Clerk: Mother, this is done.

Director: Mother, please set the Fuel Burn in kilograms Per Newton Per Second to 5kg/N/S

Mother: Clerk, please store the Fuel Burn in kilograms Per Newton Per Second to 5kg/N/S

Clear: Mother, this is done.

Director: Mother, please set the initial altitude to 50000 meters.

Mother: Clerk, please store the initial altitude.

Clear: Mother, this is done.

Directory: Mother, what are the current parameters?

Mother: Clerk, please give me spacecraft mass in kilograms, fuel mass in kilograms, gravitational pull in $\text{meters per second}^2$, initial velocity in meters per second, Fuel Burn in kilograms Per Newton Per Second, initial altitude

Clerk: Mother, here are spacecraft mass in kilograms, fuel mass in kilograms, gravitational pull in $\text{meters per second}^2$, initial velocity in meters per second, Fuel Burn in kilograms Per Newton Per Second, initial altitude

Mother: Artist, please show this information as spacecraft mass in kilograms, fuel mass in kilograms, gravitational pull in $\text{meters per second}^2$, initial velocity in meters per second, Fuel Burn in kilograms Per Newton Per Second, initial altitude.

Artist: Director, here are spacecraft mass in kilograms, fuel mass in kilograms, gravitational pull in $\text{meters per second}^2$, initial velocity in meters per second, Fuel Burn in kilograms Per Newton Per Second, initial altitude

As ACT 1 closes, the Director is pleased with the configuration, decides it is time for a break. She will find a pilot to practice during lunch.

ACT 2

This act begins with the spacecraft just entering the gravitational pull off the moon. Michael had not escaped the building in time and was tasked by Gabby to practice landing the spacecraft. Michael begins the task of navigating the lander to the lunar surface.

Pilot: What's the story mother?

Mother: Clerk, this is a simulation, please give me our initial data.

Clerk: Mother, here is our initial data.

Mother: Magellan, here is the data you will need to work with. Space mass in kilograms, fuel mass in kilograms, gravitational pull in meters per second², initial velocity in meters per second, Fuel Burn in kilograms Per Newton Per Second, initial altitude

Magellan: Mother, ready to begin

Mother, Engineering: Here is the fuel burn information in Fuel Burn in kilograms Per Newton Per Second and original fuel mass.

Engineering: Mother, ready to begin

Mother: Computer, here are your initial values. (Space mass in kilograms, fuel mass in kilograms, gravitational pull in meters per second², initial velocity in meters per second, Fuel Burn in kilograms Per Newton Per Second, initial altitude)

Mother: Artist, please show pilot this initial information. Spacecraft mass in kilograms, fuel mass in kilograms, gravitational pull in meters per second², initial velocity in meters per second, Fuel Burn in kilograms Per Newton Per Second, initial altitude

Artist: Pilot, here are here are spacecraft mass in kilograms, fuel mass in kilograms, gravitational pull in meters per second², initial velocity in meters per second, Fuel Burn in kilograms Per Newton Per Second, initial altitude.

Mother: Artist, ask pilot for desired engine thrust in Newtons Per Second.

Artist: Pilot, what is your desired engine thrust?

Pilot: Mother, please set engine thrust to 1 N/sec

Mother: Engineering, please set thrust to 1 N/sec.

Engineering: Mother, this is done.

Mother: Magellan, what is our present status

Magellan: Engineering, what is our current engine thrust and the mass of the remaining fuel?

Engineering: Magellan, mass of remaining fuel is 5555 kg and our thrust is 1 N/sec

Magellan: Computer, update thrust 1/N sec, consider 1 second has elapsed, what is our present altitude?

Magellan: Mother, here is the data reflecting our current status.

[This dialog repeats until altitude is 0]