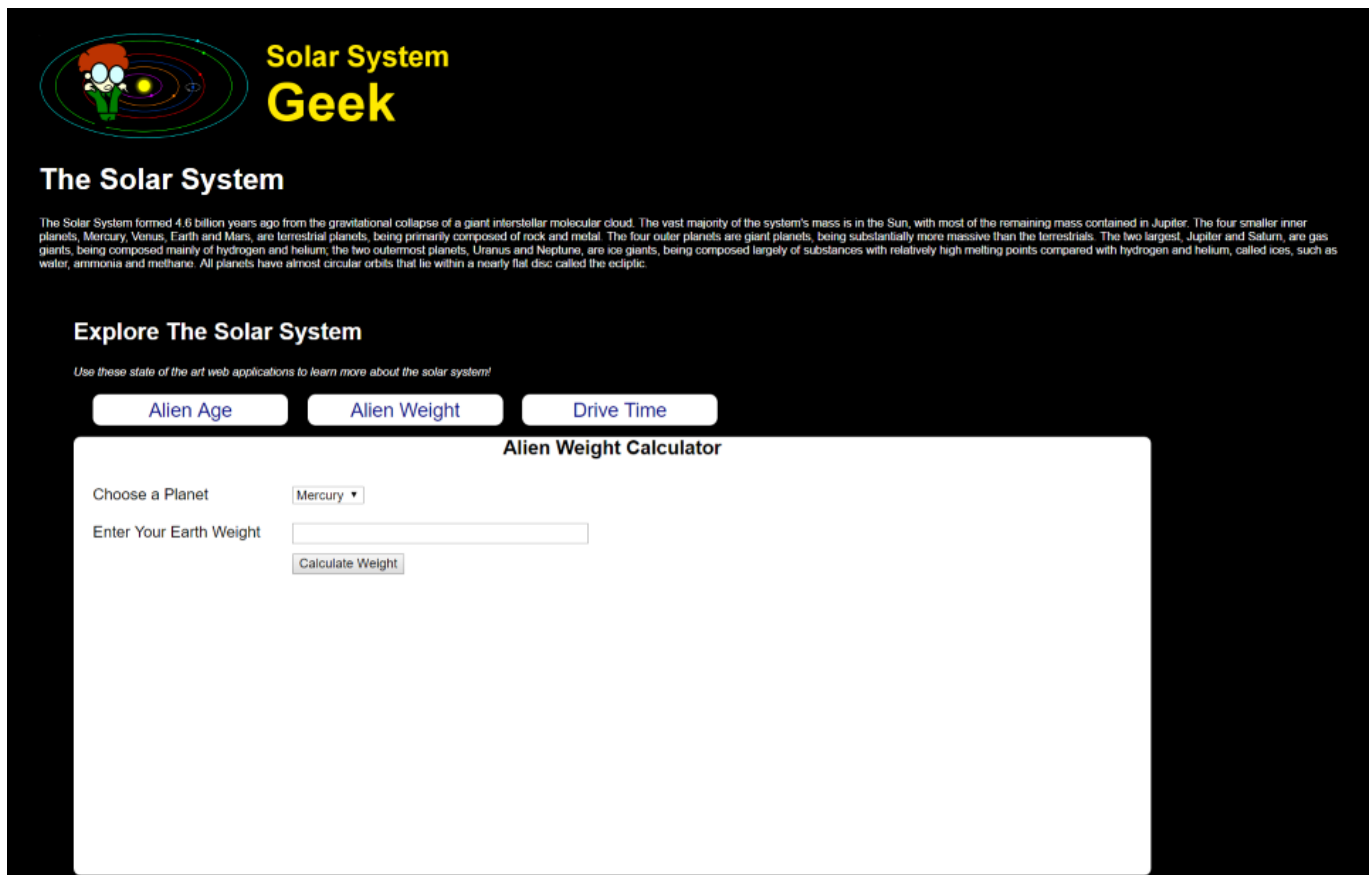# MVC Controllers - Pair Exercise

Day 1 - Monday - Solar System Geek Calculators

On the Solar System Geek home page there are links for three different calculation tools to "Explore the Solar System". Implement these three calculators as specified below and modify the home page links to point to your implementations.

1. Alien Weight Calculator

Given a weight on earth, this calculator should compute the equivalent weight on another planet in the solar system. Use the gravity of the alien planet compared to earth gravity to calculate the alien weight.

Input

Output

Solar System
Geek

The Solar System

The Solar System formed 4.6 billion years ago from the gravitational collapse of a giant interstellar molecular cloud. The vast majority of the system's mass is in the Sun, with most of the remaining mass contained in Jupiter. The four smaller inner planets, Mercury, Venus, Earth and Mars, are terrestrial planets, being primarily composed of rock and metal. The four outer planets are giant planets, being substantially more massive than the terrestrials. The two largest, Jupiter and Saturn, are gas giants, being composed mainly of hydrogen and helium; the two outermost planets, Uranus and Neptune, are ice giants, being composed largely of substances with relatively high melting points compared with hydrogen and helium, called ices, such as water, ammonia and methane. All planets have almost circular orbits that lie within a nearly flat disc called the ecliptic.
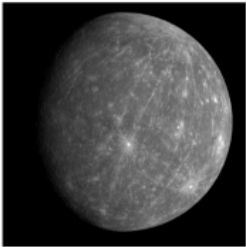
Explore The Solar System

Use these state of the art web applications to learn more about the solar system!

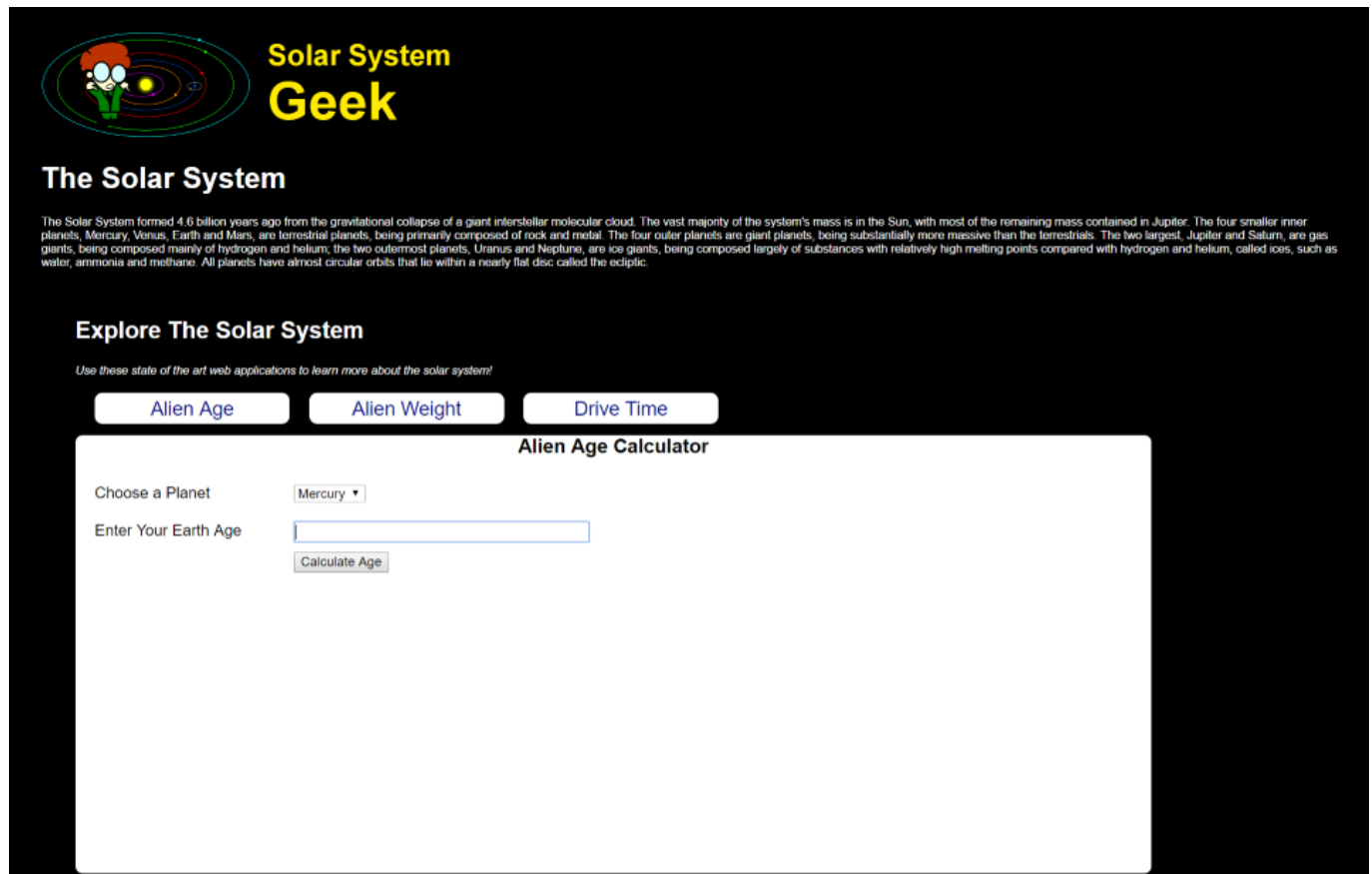| Alien Age | Alien Weight | Drive Time |

If you are 172 lbs on planet Earth, you would weigh 63.64 lbs on Mercury.

2. Alien Age Calculator

Given an age in Earth years, this calculator should compute the equivalent age in years for another planet in the solar system.

Input

Output

Solar System
Geek

The Solar System

The Solar System formed 4.6 billion years ago from the gravitational collapse of a giant interstellar molecular cloud. The vast majority of the system's mass is in the Sun, with most of the remaining mass contained in Jupiter. The four smaller inner planets, Mercury, Venus, Earth and Mars, are terrestrial planets, being primarily composed of rock and metal. The four outer planets are giant planets, being substantially more massive than the terrestrials. The two largest, Jupiter and Saturn, are gas giants, being composed mainly of hydrogen and helium; the two outermost planets, Uranus and Neptune, are ice giants, being composed largely of substances with relatively high melting points compared with hydrogen and helium, called ices, such as water, ammonia and methane. All planets have almost circular orbits that lie within a nearly flat disc called the ecliptic.

Explore The Solar System

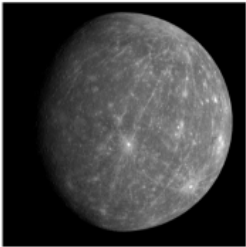*Use these state of the art web applications to learn more about the solar system!*

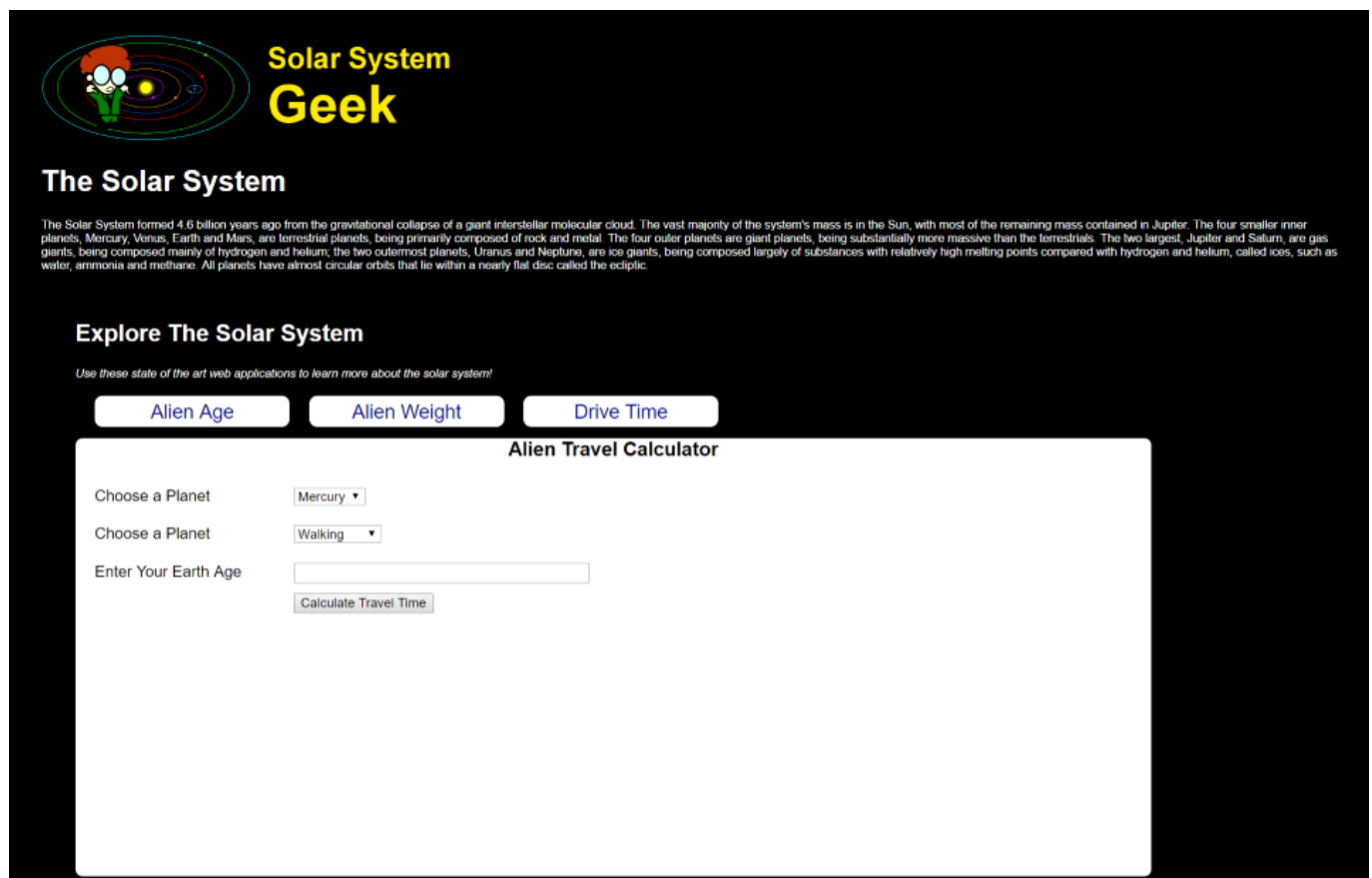| Alien Age	Alien Weight	Drive Time

If you are 36 years old on planet Earth, then you are 149.49 Mercury years old.

3. Alien Travel Calculator

Given a destination planet, mode of transportation, and age of the traveler at the start of the journey, this calculator should compute the total travel time and age of the traveler upon arrival. The calculation should be based on the average distance between planets in the solar system and the following modes of transportation and their speeds:

- **Walking** (3mph)
- **Car** (100mph)
- **Bullet Train** (200mph)
- **Boeing 747** (570mph)
- **Concorde** (1350mph)

Input

Output

Solar System Geek

The Solar System

The Solar System formed 4.6 billion years ago from the gravitational collapse of a giant interstellar molecular cloud. The vast majority of the system's mass is in the Sun, with most of the remaining mass contained in Jupiter. The four smaller inner planets, Mercury, Venus, Earth and Mars, are terrestrial planets, being primarily composed of rock and metal. The four outer planets are giant planets, being substantially more massive than the terrestrials. The two largest, Jupiter and Saturn, are gas giants, being composed mainly of hydrogen and helium; the two outermost planets, Uranus and Neptune, are ice giants, being composed largely of substances with relatively high melting points compared with hydrogen and helium, called ices, such as water, ammonia and methane. All planets have almost circular orbits that lie within a nearly flat disc called the ecliptic.
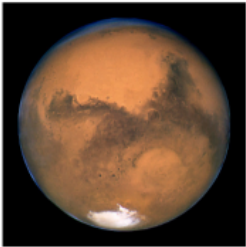
Explore The Solar System

Use these state of the art web applications to learn more about the solar system!

| Alien Age | Alien Weight | Drive Time |

Traveling by bullet train you will reach Mars in 27.78 years. You will be 58.78 years old.