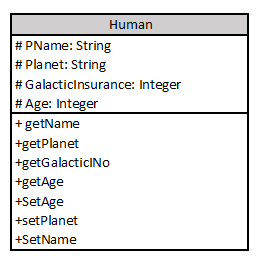
OBJECT ORIENTED PROGRAMMING - GALACTIC DATABASE

We are going to implement a database for the new Galactic census. Each race in the galaxy will have information stored about them, and each race has a number of different characteristics.

Of the few races which have so far been discovered – we know this much:

**Humans:**



**Martians:**

These are like People but have Tentacles

**Venusians:**

These are like People but they have extra Heads.

**Jovians:**

These are like Venusians but have extra Eyes.

**Tasks**

1. Produce a Class Diagram for each of the three galactic races
2. Code the Classes in C# with basic functionality ensuring that there are Accessor / Setter / Constructor methods. If a property is unknown for a being then use a default value, the planet should always be defaulted to the race e.g. Human = Earth and Martian = Mars. You may have many Constructor methods with different parameters
3. Create a few different instances of Galactic beings and test out the methods.

Constructors & Polymorphism

1. Review your Martian class. You may have originally created this and allowed the user to Get the number of tentacles and set the number of tentacles. During our voyage through space and first contact with Martians we have realised that Tentacles are dependent upon the Martians age. A Martian is born with two tentacles and for every 20 years of it’s life it grows another two tentacles.
2. Remove the setTentacles method (if you created one)
3. Create a method that Calculates the number of tentacles and stores these
4. During construction, use the age to set the number of tentacles
5. Review your Venusian class. On our recent trip to Venus we discovered that Venusians are born with a number of heads. The number of heads cannot be changed from when they are born (or recorded on our Galactic Database) but we can retrieve the number of heads using a Getter method.
6. Remove any method for setting the number of heads (if created)
7. Edit the class to ensure that once heads are set this remains fixed and cannot be altered
8. Create a Getter Method to Get the number of heads
9. Review your setAge method in the Human class – this should validate the input and ensure that the age is within a valid range for Humans. Output an error message if it is not. With regards to Polymorphism – Martians setAge should be implemented differently as Martians can live up to 500 years old! Venusians and Jovians can live up to 1000 years old – implement their setAge in the most efficient manner.
10. Create a full Menu driven solution in Sub\_Main() that allows creation of new entries into the Galactic Database for each planetary race. From the menu we must be allowed to do some/all of the following:

Human Menu

1:> Set Age

2:> Change Planet

3:> View Name

4:> etc

Martian Menu

1:> …

2:> …

3:> View the number of tentacles

1. Submit Final Code (with all features that you wish to include) by Friday 5th October