Jeroo Methods

Section 9.1 Creating Methods

1. What is a method?

   A method is a collection of statements that are written in some programming language to describe a specific behavior.

2. List the two steps needed to create a method

   1) define and name the new behavior

   2) write the source code for the method

3. Name two situations that merit the creation of a method?

   1) A complex algorithm especially if two or more Jeroos will need to perform these steps

   2) Any sequence of steps that occur several times

4. How is a Jeroo method different from the main method?

   a Jeroo method defines a behavior that applies to every Jeroo, we cannot instantiate a Jeroo in a Jeroo method, and we do not specify which Jeroo is to perform the steps

5. Complete the method plantThree below which instructs a Jeroo to plant a flower in the 3 spaces directly in front of it.

```
// plants a flower in first three locations directly in front of the Jeroo.
method plantThree()
{
   hop(); plant();
   hop(); plant();
   hop(); plant();
}
```

6. Create a method named **pickAndPlant** that instructs a Jeroo to pick a flower from its current location then moves ahead one space and plants the flower.

```
method pickAndPlant()
{
    pick();
    hop();
    plant();
}
```

7. A Jeroo named joe has been created in the main method below. Send a message to joe asking him to perform the pick and plant behavior defined above.

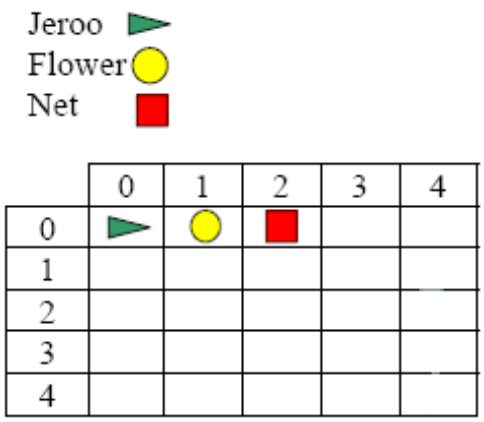
```
method main()
{
    Jeroo joe = new Jeroo();
    joe.pickAndPlant();


}
```

Section 9.2 Conditions

8. What is a precondition? something that is assumed to be true before the method is invoked

9. What is a postcondition? something that is true after the method has been executed

10. Assume there is a Jeroo facing east and there is a flower directly in front of him and a net on the opposite side of the flower. Refer to the figure below:



The method **disableNet** below picks the flower in front of the Jeroo, tosses it on the net and advances one spot pasted the nets position.

```
method disableNet()
{
     hop();
     pick();
     toss();
     hop(2);
}
```

Using the guidelines discussed in the notes write the precondition and postcondition for the method in the space provided below. (Refer to section 3.3 for further help)

```
// precondition: a flower and net are directly in front of the Jeroo
//
// postcondition: the Jeroo picked up the flower, disabled the net, and moved
//                one space pasted the nets position.
//
```