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Classes: Basics

1. Modify the class to add a isTails method that returns true when the value is not heads.

```
public class Coin
{

   // constant to represent heads
   private static int HEADS = 1;

   // current value of the coin
   private int value = 0;

   // method to randomly set the value of the coin to heads or tails
   public void flip()
   {
      if (Math.random() < 0.5)
      {
          value = 0;
      }
      else
      {
         value = 1;
      }
   }

   // return true if the value is heads or false otherwise
   public boolean isHeads()
   {
      return value == HEADS;
   }

   // convert the value to a string
   public String toString()
   {
      if (value == HEADS) return "Heads";
      else return "Tails";
   }
```

public boolean isTails()
{
return value == TAILS;
}

```
   // test the class
   public static void main(String[] args)
   {
```

```
    Coin myCoin = new Coin();
    for (int i = 0; i < 10; i++)
    {
      myCoin.flip();
      System.out.println(myCoin);
      System.out.println(myCoin.isHeads());
      System.out.println(myCoin.isTails());
    }
  }
}
```

2. Modify the code below to add more constructors. Also modify the main method to test the new constructors.

```
public class Person
{
  // fields
  private String name;
  private String email;
  private String phoneNumber;

  // constructor
  public Person(String theName)
  {
    this.name = theName;
  }
public Person(String theName, String email, String phoneNumber)
{
this.name = theName;
this.email = email;
this.phoneNumber = phoneNumber;


  // methods - getters
  public String getName() { return this.name;}
  public String getEmail() { return this.email;}
  public String getPhoneNumber() { return this.phoneNumber;}

  // methods - setters
  public void setName(String theName) { this.name = theName;}
  public void setEmail(String theEmail) {this.email = theEmail;}
  public void setPhoneNumber(String thePhoneNumber) { this.phoneNumber =
thePhoneNumber;}
  public String toString()
  {
    return this.name + " " + this.email + " " + this.phoneNumber;
  }

  // main method for testing
  public static void main(String[] args)
```

```
  {
    Person p1 = new Person("Sana");
    System.out.println(p1);
    Person p2 = new Person("Jean");
    p2.setEmail("jean@gmail.com");
    p2.setPhoneNumber("404 899-9955");
    System.out.println(p2);
```

Person p3 = new Person("Pratham", "pharad37@gmail.com", "421-421-1234");

System.out.println(p3);

```
  }
}
```

3. `package pack1;`

Public `class A`

```
{
    public A()
    {
        //public constructor
    }
}

package pack2;

import pack1.*;

class B
{
    A a = new A();        //Compile Time Error
}
```

Check if compile time error exists. If yes, correct the code to remove the error.