Group 19

//\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

// CoinFlip.java

//

//

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**public** **class** CoinFlip

{

//-----------------------------------------------------------------

// Creates a Coin object, flips it, and prints the results.

//-----------------------------------------------------------------

**public** **static** **void** main (String[] args)

{

MonetaryCoin coin1 = **new** MonetaryCoin(1);

MonetaryCoin coin2 = **new** MonetaryCoin(5);

MonetaryCoin coin3 = **new** MonetaryCoin(10);

MonetaryCoin coin4 = **new** MonetaryCoin(25);

MonetaryCoin coin5 = **new** MonetaryCoin(50);

MonetaryCoin coin6 = **new** MonetaryCoin(100);

MonetaryCoin coin7 = **new** MonetaryCoin(100);

coin1.flip();

**int** value1 = coin1.pay();

coin2.flip();

**int** value2 = coin2.pay();

coin3.flip();

**int** value3 = coin3.pay();

coin4.flip();

**int** value4 = coin4.pay();

coin5.flip();

**int** value5 = coin5.pay();

coin6.flip();

**int** value6 = coin6.pay();

coin7.flip();

**int** value7 = coin7.pay();

System.***out***.println (coin1 +"\t"+ value1);

System.***out***.println (coin2 +"\t"+ value2);

System.***out***.println (coin3 +"\t"+ value3);

System.***out***.println (coin4 +"\t"+ value4);

System.***out***.println (coin5 +"\t"+ value5);

System.***out***.println (coin6 +"\t"+ value6);

System.***out***.println (coin7 +"\t"+ value7);

System.***out***.println ();

System.***out***.println ("Total Value: "+(value1+value2+value3+value4+value5+value6+value7));

}

}

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// Coin.java

//

// Represents a coin with two sides that can be flipped.

//\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

**public** **class** Coin

{

**private** **final** **int** HEADS = 0;

**private** **final** **int** TAILS = 1;

**private** **int** face;

//-----------------------------------------------------------------

// Flips the coin by randomly choosing a face value.

//-----------------------------------------------------------------

**public** Coin ()

{

flip();

}

//-----------------------------------------------------------------

// Flips the coin by randomly choosing a face value.

//-----------------------------------------------------------------

**public** **void** flip ()

{

face = (**int**) (Math.*random*() \* 2);

}

//-----------------------------------------------------------------

// Returns true if the current face of the coin is heads.

//-----------------------------------------------------------------

**public** **boolean** isHeads ()

{

**return** (face == HEADS);

}

//-----------------------------------------------------------------

// Returns the current face of the coin as a string.

//-----------------------------------------------------------------

**public** String toString()

{

String faceName;

**if** (face == HEADS)

faceName = "Heads";

**else**

faceName = "Tails";

**return** faceName;

}

}

**public** **class** MonetaryCoin **extends** Coin

{

**private** **int** num;

**public** MonetaryCoin (**int** value)

{

num = value;

}

**public** **int** pay()

{

**return** num;

}

}













