END SECTION – PRACTICE – PART 2

Your task here is to develop the moving parts of the Great Robbery application.

USE the private keyword as many times as you can!

1. Create Gang class.
   - **It contains Rob and Bobby objects in an array. They are defined in the constructor**
   - **The letsRob function randomly chooses a building and based on a supporter function (isSuccessfulRobbery) it displays different texts**
   - **The summary of the stole items' value is stored in this class, too.**

   Fields:

   - **Criminals array**
   - **Random number generator**
   - **double sumRobbedValue**

   Functions:

   - **getSumRobbedValue – returns the summarized value of the robbed items**
   - **getGangInfo – cycles through the criminals array in a for loop and calls printBioData on the criminal objects**
   - **isSuccessfulRobbery – in this function an int number is generated between 0 and 100. The SUCCESS_PERCENTAGE is multiplied by the number of criminals. If the random number is smaller than the calculated success percentage, the function returns true. Anyways, it returns false.**
   - **letsRob – takes a building array as parameter – generates a random number between zero and the length of the building array.**

Then the isSuccessfulRobbery function is used in an if statement:

- **If TRUE**

  1. Then the following text is printed out:
  "The gang managed to rob the following items from the" + building name + ":"

  2. After that a for loop summarizes the value of the items in the building and adds it to the sumRobbedValue

  3. Also the item names are printed out in the loop

- **If FALSE**

  1. In the else block the following text is printed out:
  "The gang tried to rob the" + building name + "but they failed"

2. Create Police class

- **Adam Palmer object is defined in this class's constructor.**
- **A supporter function is created which returns whether the detective could catch the criminals or not.**
- **The main function uses the supporter function to print out the appropriate text when Rob and Bobby are caught and it prints out another text when the detective can't catch them.**

Fields:

- **Detective adamPalmer**

Functions:

- **areCriminalsCaught – Uses Random class to generate a random numberbetween 0 and 100. If the random number is greater than or equals to the Detective's SUCCESS_PERCENTAGE it returns false. Anyways it returns true.**

- **catchCriminals – takes a gang object as parameter and using the areCriminals in an if-statement**

    - **If areCriminals returns true:**
      1. Prints out the following:
      detective's name + " managed to catch the gang."

      2. If the gang's stole value is greater than zero it prints out the following:
      "The solen items are recovered. Their overall value is estimated to $" + sumRobbedValue from the gang object

      3. If the stolen value is zero it prints out the following:
      "The gang couldn't steal anything."

      4. Returns true

    - **If areCriminals returns false:**
      1. Prints out that:
      detective's name + " managed to catch the gang."

      2. Also, the following:
      "They managed to steal items valued $" + sumRobbedValue from the gang object

      3. Returns false

3. Create TheGreatRobberyApp class

- **The following objects are needed in the main method:**
  City
  Gang
  Police
- **The gang info is printed out.**
- **The gang's letsRob function is used with the city's getBuildings function as parameter.**
- **Then the police object's catch criminals function is called with the gang object as parameter.**
- **A do-while loop is needed to run the letsRob function while the gang isn't caught (*hint: the opposite of the catch criminals function's returned value is needed in the while condition*)**