

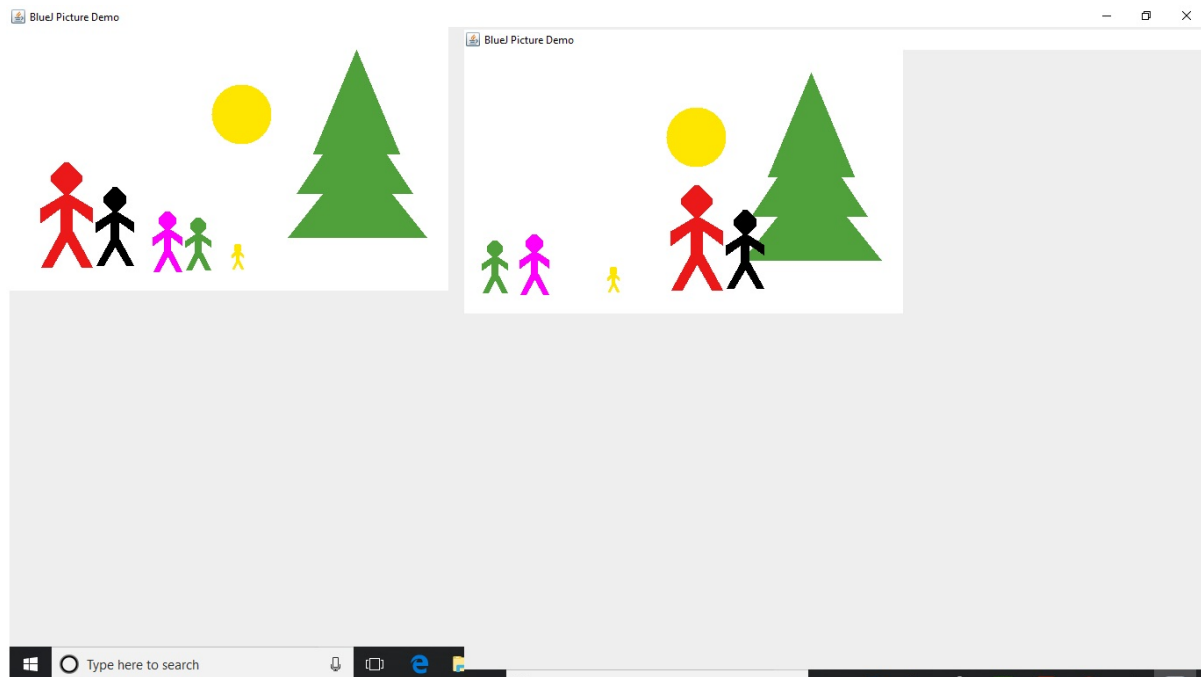
Lab 01 Report SOL2

Group members

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Exercise 1



```
Person desmondRed = new Person();
desmondRed.makeVisible();
desmondRed.moveHorizontal(-50);
desmondRed.moveHorizontal(100);
desmondRed.moveHorizontal(-200);
desmondRed.moveHorizontal(-25);
desmondRed.moveLeft();
desmondRed.moveLeft();
desmondRed.changeColor("red");
desmondRed.changeSize(120, 60);
Person ahmedBlack = new Person();
ahmedBlack.makeVisible();
ahmedBlack.moveDown();
ahmedBlack.moveDown();
ahmedBlack.moveHorizontal(-200);
ahmedBlack.moveRight();
ahmedBlack.moveRight();
ahmedBlack.changeSize(90, 45);
ahmedBlack.moveUp();
Person zitaM = new Person();
zitaM.makeVisible();
zitaM.moveHorizontal(-100);
zitaM.changeSize(70, 35);
zitaM.moveDown();
zitaM.moveDown();
zitaM.changeColor("magenta");
Person tinaGreen = new Person();
tinaGreen.makeVisible();
tinaGreen.changeColor("green");
tinaGreen.moveDown();
tinaGreen.moveDown();
tinaGreen.moveHorizontal(50);
tinaGreen.moveHorizontal(-135);
tinaGreen.moveRight();
tinaGreen.moveVertical(5);
Person aniYellow = new Person();
aniYellow.makeVisible();
aniYellow.moveVertical(25);
aniYellow.moveDown();
aniYellow.moveLeft();
aniYellow.changeSize(30, 15);
aniYellow.moveDown();
aniYellow.changeColor("yellow");
Triangle triangle1 = new Triangle();
triangle1.makeVisible();
triangle1.moveVertical(-75);
triangle1.moveUp();
triangle1.moveHorizontal(100);
triangle1.moveHorizontal(25);
triangle1.moveRight();
triangle1.moveRight();
triangle1.moveRight();
triangle1.changeSize(120, 100);
triangle1.moveUp();
Triangle triangle2 = new Triangle();
triangle2.makeVisible();
triangle2.moveHorizontal(115);
triangle2.changeSize(150, 120);
triangle2.moveRight();
triangle2.moveRight();
triangle2.moveRight();
triangle2.moveHorizontal(8);
triangle2.moveVertical(-70);
triangle2.moveUp();
```

```
triangle2.moveUp();
triangle2.changeSize(100, 170);
triangle2.moveDown();
triangle2.moveDown();
triangle2.moveDown();
triangle2.moveDown();
triangle2.changeSize(100, 135);
triangle2.moveUp();
Triangle triangle3 = new Triangle();
triangle3.makeVisible();
triangle2.changeSize(100, 160);
triangle2.changeSize(100, 135);
triangle3.changeSize(100, 160);
triangle3.slowMoveHorizontal(90);
triangle3.moveRight();
triangle3.moveRight();
triangle3.moveRight();
triangle3.moveRight();
triangle3.moveRight();
triangle3.moveHorizontal(4);
triangle3.moveHorizontal(-8);
Circle sun = new Circle();
sun.makeVisible();
sun.changeColor("yellow");
sun.moveVertical(-25);
desmondRed.slowMoveHorizontal(200);
ahmedBlack.slowMoveHorizontal(200);
zitaM.slowMoveHorizontal(-100);
tinaGreen.slowMoveHorizontal(-180);
aniYellow.slowMoveHorizontal(-90);
sun.slowMoveVertical(100);
sun.slowMoveVertical(-150);
sun.slowMoveVertical(25);
sun.slowMoveVertical(25);
```

Exercise 2 Animation

Preparation exercise

1) The three parts of the class definition are;

-Fields(also known as instance variables

-Constructors and

-Methods

2) The Boolean has two possible outcomes namely; true or false. The Boolean was introduced in the code to draw the picture if all the methods introduced were true.

3) We say the picture object uses other objects because the picture was drawn from other objects within the code. The wall and window from the object Square, the sun from the object Circle and the roof from the object Triangle

Lab Exercise

```
/** This is the class animation of our lab task 1
 *The class contains three main parts namely:
 *The fields(also known as instance variables), the constructors and the methods
 *
 *
 * @author (Desmond Nduma and Galadima Ahmed)
 */
public class Animation
{
    //instantiating instance variables
    private Person desmondRed;
    private Person ahmedBlack;
    private Person zitaM;
    private Person tinaGreen;
    private Person aniYellow;
    private Circle sun;
    private Triangle triangle1;
    private Triangle triangle2;
    private Triangle triangle3;
    private boolean drawn;

    /**
     * Constructor for objects of class Animation
     */
    public Animation()
    {
        desmondRed = new Person();
        ahmedBlack = new Person();
        zitaM = new Person();
        tinaGreen = new Person();
        aniYellow = new Person();
        sun = new Circle();
        triangle1 = new Triangle();
        triangle2 = new Triangle();
        triangle3 = new Triangle();
        drawn = false;
    }

    /**
     * draw this picture
     */
    public void draw()
    {
        if(!drawn) {
            desmondRed.makeVisible();
        }
    }
}
```

```
desmondRed.moveHorizontal(-50);
desmondRed.moveHorizontal(100);
desmondRed.moveHorizontal(-200);
desmondRed.moveHorizontal(-25);
desmondRed.moveLeft();
desmondRed.moveLeft();
desmondRed.changeColor("red");
desmondRed.changeSize(120, 60);
```

```
ahmedBlack.makeVisible();
ahmedBlack.moveDown();
ahmedBlack.moveDown();
ahmedBlack.moveHorizontal(-200);
ahmedBlack.moveRight();
ahmedBlack.moveRight();
ahmedBlack.changeSize(90, 45);
ahmedBlack.moveUp();
```

```
zitaM.makeVisible();
zitaM.moveHorizontal(-100);
zitaM.changeSize(70, 35);
zitaM.moveDown();
zitaM.moveDown();
zitaM.changeColor("magenta");
```

```
tinaGreen.makeVisible();
tinaGreen.changeColor("green");
tinaGreen.moveDown();
tinaGreen.moveDown();
tinaGreen.moveHorizontal(50);
tinaGreen.moveHorizontal(-135);
tinaGreen.moveRight();
tinaGreen.moveVertical(5);
```

```
aniYellow.makeVisible();
aniYellow.moveVertical(25);
aniYellow.moveDown();
aniYellow.moveLeft();
aniYellow.changeSize(30, 15);
aniYellow.moveDown();
aniYellow.changeColor("yellow");
```

```
triangle1.makeVisible();
triangle1.moveVertical(-75);
triangle1.moveUp();
triangle1.moveHorizontal(100);
triangle1.moveHorizontal(25);
triangle1.moveRight();
triangle1.moveRight();
triangle1.moveRight();
triangle1.changeSize(120, 100);
triangle1.moveUp();
```

```
triangle2.makeVisible();
triangle2.moveHorizontal(115);
triangle2.changeSize(150, 120);
triangle2.moveRight();
triangle2.moveRight();
triangle2.moveRight();
triangle2.moveHorizontal(8);
triangle2.moveVertical(-70);
triangle2.moveUp();
triangle2.moveUp();
triangle2.changeSize(100, 170);
```

```

triangle2.moveDown();
triangle2.moveDown();
triangle2.moveDown();
triangle2.moveDown();
triangle2.changeSize(100, 135);
triangle2.moveUp();

triangle3.makeVisible();
triangle2.changeSize(100, 160);
triangle2.changeSize(100, 135);
triangle3.changeSize(100, 160);
triangle3.slowMoveHorizontal(90);
triangle3.moveRight();
triangle3.moveRight();
triangle3.moveRight();
triangle3.moveRight();
triangle3.moveRight();
triangle3.moveHorizontal(4);
triangle3.moveHorizontal(-8);

sun.makeVisible();
sun.changeColor("yellow");
sun.moveVertical(-25);
drawn = true;

```

```

    }
}

```

```

public void start()
{
    desmondRed.slowMoveHorizontal(200);
    ahmedBlack.slowMoveHorizontal(200);
    zitaM.slowMoveHorizontal(-100);
    tinaGreen.slowMoveHorizontal(-180);
    aniYellow.slowMoveHorizontal(-90);
    sun.slowMoveVertical(100);
    sun.slowMoveVertical(-150);
    sun.slowMoveVertical(25);
    sun.slowMoveVertical(25);
}
}

```

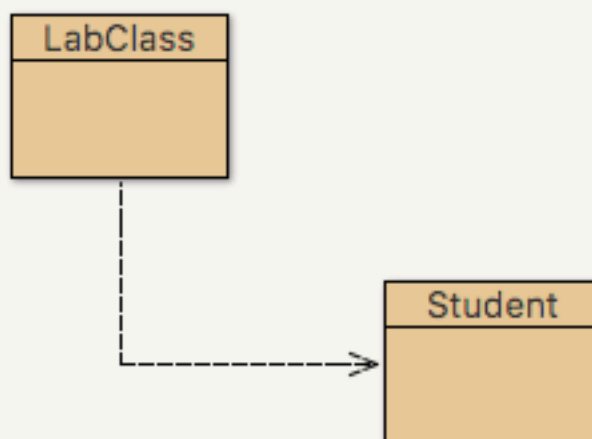
Exercise 3

```
Student student1 = new Student("Christian Rolando", "23456");
Student student2 = new Student("Patrick Evra", "457362");
Student student3 = new Student("Jay jay Okocha", "237454");
Student student6 = new Student("samuel Etto", "23465");
Student student4 = new Student("Kanu Uwanko", "234869");
Student student5 = new Student("George weah", "548576");
LabClass labClass1 = new LabClass(6);
labClass1.enrollStudent(student1);
labClass1.enrollStudent(student2);
labClass1.enrollStudent(student3);
labClass1.enrollStudent(student4);
labClass1.enrollStudent(student5);
labClass1.enrollStudent(student6);
student1.getName()
    returned String "Christian Rolando"
student1.getLoginName()
    returned String "Chri234"
student2.getLoginName()
    returned String "Patr457"
student3.getLoginName()
    returned String "Jay 237"
student6.getLoginName()
    returned String "samu234"
student4.getLoginName()
    returned String "Kanu234"
student4.getLoginName()
    returned String "Kanu234"
student5.getLoginName()
    returned String "Geor548"
labClass1.setRoom("124");
labClass1.setInstructor("Ahmed Galadima");
labClass1.setTime("Wednesday, 8am");
student1.addCredits(19);
student2.addCredits(18);
student3.addCredits(14);
student6.addCredits(8);
student4.addCredits(15);
student5.addCredits(19);
labClass1.printList();
Lab class Wednesday, 8am
Instructor: Ahmed Galadima    Room: 124
Class list:
Christian Rolando, student ID: 23456, credits: 19
Patrick Evra, student ID: 457362, credits: 18
Jay jay Okocha, student ID: 237454, credits: 14
Kanu Uwanko, student ID: 234869, credits: 15
George weah, student ID: 548576, credits: 19
samuel Etto, student ID: 23465, credits: 8
Number of students: 6
labClass1.printList();
Lab class Wednesday, 8am
Instructor: Ahmed Galadima    Room: 124
Class list:
Christian Rolando, student ID: 23456, credits: 19
Patrick Evra, student ID: 457362, credits: 18
Jay jay Okocha, student ID: 237454, credits: 14
Kanu Uwanko, student ID: 234869, credits: 15
George weah, student ID: 548576, credits: 19
samuel Etto, student ID: 23465, credits: 8
Number of students: 6
```

New Class...



Compile

student1:
Studentstudent2:
Studentstudent3:
Studentstudent6:
Studentstudent4:
Studentstudent5:
StudentlabClass1:
LabClass

labClass1 : LabClass

