

MTS 3033 Object Oriented Programming

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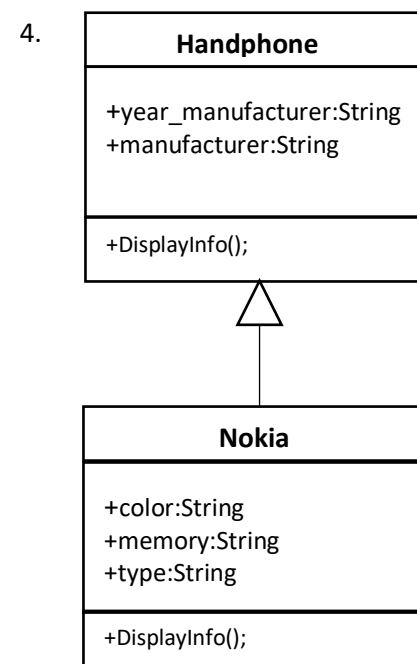
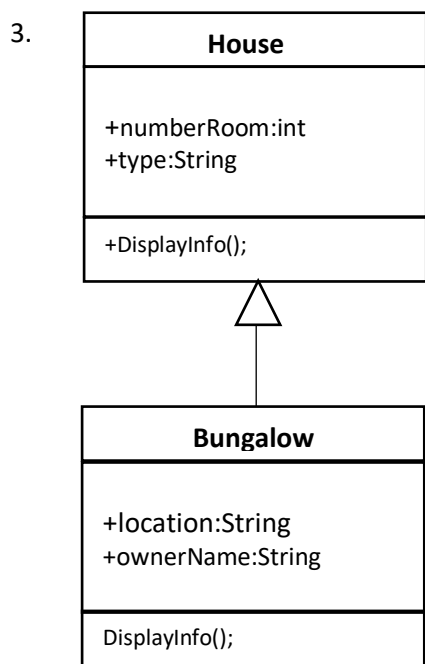
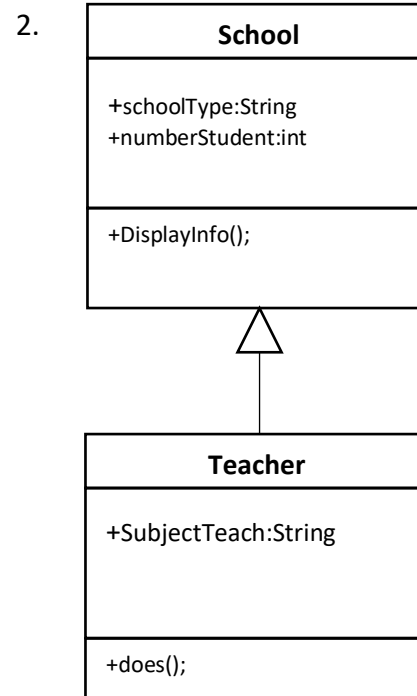
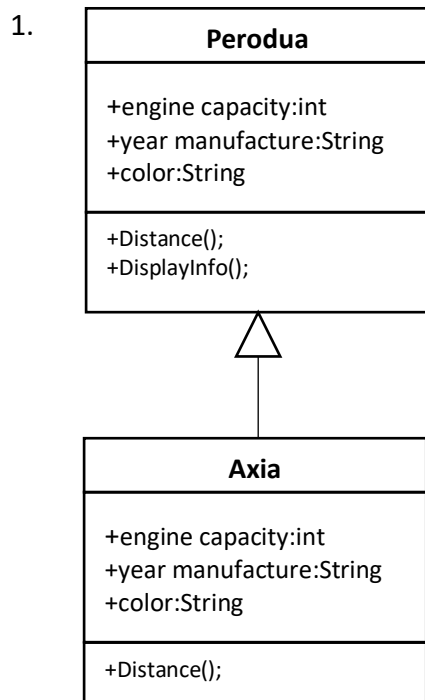
Matric ID: D20201095609

Group: A

Assignment #5 (Due Date 22/12/21 @ 11pm)

Instruction: Written and paste your print screen on this worksheet. Write your program using Notepad and compile using Command Prompt.

Write a suitable inheritance program according to the following program. **[20 marks:5 marks each]**



SOALAN 1:

```

Axia - Notepad
File Edit Format View Help
class Perodua
{
    int engine_capacity = 1500;
    String year_manufacture = "2020";
    String color = "White";
    String name = "Perodua";

    void DisplayInfo()
    {
        System.out.println("*****Information of Vehicle*****");
        System.out.println();
        System.out.println("Vehicle name : "+name);
        System.out.println("Vehicle color : "+color);
        System.out.println("Year manufacture : "+year_manufacture);
        System.out.println("Vehicle Engine Capacity : "+engine_capacity+" cc");
    }

    void Distance()
    {
        float speed = 120;
        float time = 5;
        float distance=speed*time;
        System.out.println();
        System.out.println("Distance travelled by "+name+" is : "+distance+" km" );
    }
}

public class Axia extends Perodua
{
    int engine_capacity = 1000;
    String year_manufacture = "2021";
    String color = "Black";
    String name = "Axia";

    void Distance()
    {
        float speed = 100;
        float time = 3;
        float distance=speed*time;
        System.out.println();
        System.out.println();
        System.out.println("Distance travelled by "+name+" is : "+distance+" km" );
    }
}

public static void main(String[] args)
{
    Perodua myPerodua = new Perodua();

    myPerodua.DisplayInfo();
    myPerodua.Distance();

    Axia myAxia = new Axia();
    myAxia.Distance();
}
}
Ln 1, Col 1 100% Windows (CRLF) UTF-8

```

```

Axia - Notepad
File Edit Format View Help
}

public class Axia extends Perodua
{
    int engine_capacity = 1000;
    String year_manufacture = "2021";
    String color = "Black";
    String name = "Axia";

    void Distance()
    {
        float speed = 100;
        float time = 3;
        float distance=speed*time;
        System.out.println();
        System.out.println();
        System.out.println("Distance travelled by "+name+" is : "+distance+" km" );
    }
}

public static void main(String[] args)
{
    Perodua myPerodua = new Perodua();

    myPerodua.DisplayInfo();
    myPerodua.Distance();

    Axia myAxia = new Axia();
    myAxia.Distance();
}
}
Ln 1, Col 1 100% Windows (CRLF) UTF-8

```

```
Administrator: Command Prompt
Microsoft Windows [Version 10.0.22000.376]
(c) Microsoft Corporation. All rights reserved.

C:\windows\system32>cd\

C:\>set path=C:\Program Files\Java\jdk1.8.0_202\bin

C:\>javac Axia.java

C:\>java Axia
*****Information of Vehicle*****

Vehicle name : Perodua
Vehicle color : White
Year manufacture : 2020
Vehicle Engine Capacity : 1500 cc

Distance travelled by Perodua is : 600.0 km

Distance travelled by Axia is : 300.0 km

C:\>
```

SOALAN 2:



The image shows a Notepad window titled "Teacher - Notepad" containing a Java program. The program defines a base class "School" and a derived class "Teacher". The "School" class has attributes "number_student" (1000) and "school_type" ("High School"), and a method "DisplayInfo()". The "Teacher" class inherits from "School", has an attribute "subject_teaching" ("Object Oriented Programming"), and a method "does()". The "main" method in "Teacher" creates a "Teacher" object, calls "DisplayInfo()", and "does()". Below the Notepad window is a Command Prompt window titled "Administrator: Command Prompt" showing the execution of the program. The output matches the expected behavior of the code.

```
Teacher - Notepad
File Edit Format View Help
class School
{
    int number_student = 1000;
    String school_type = "High School";

    public void DisplayInfo()
    {
        System.out.println("*****Information of School and Teacher*****");
        System.out.println();
        System.out.println("The school type is : " +school_type);
        System.out.println("This school have " +number_student+ " students. ");
    }
}

public class Teacher extends School
{
    String subject_teaching = "Object Oriented Programming";

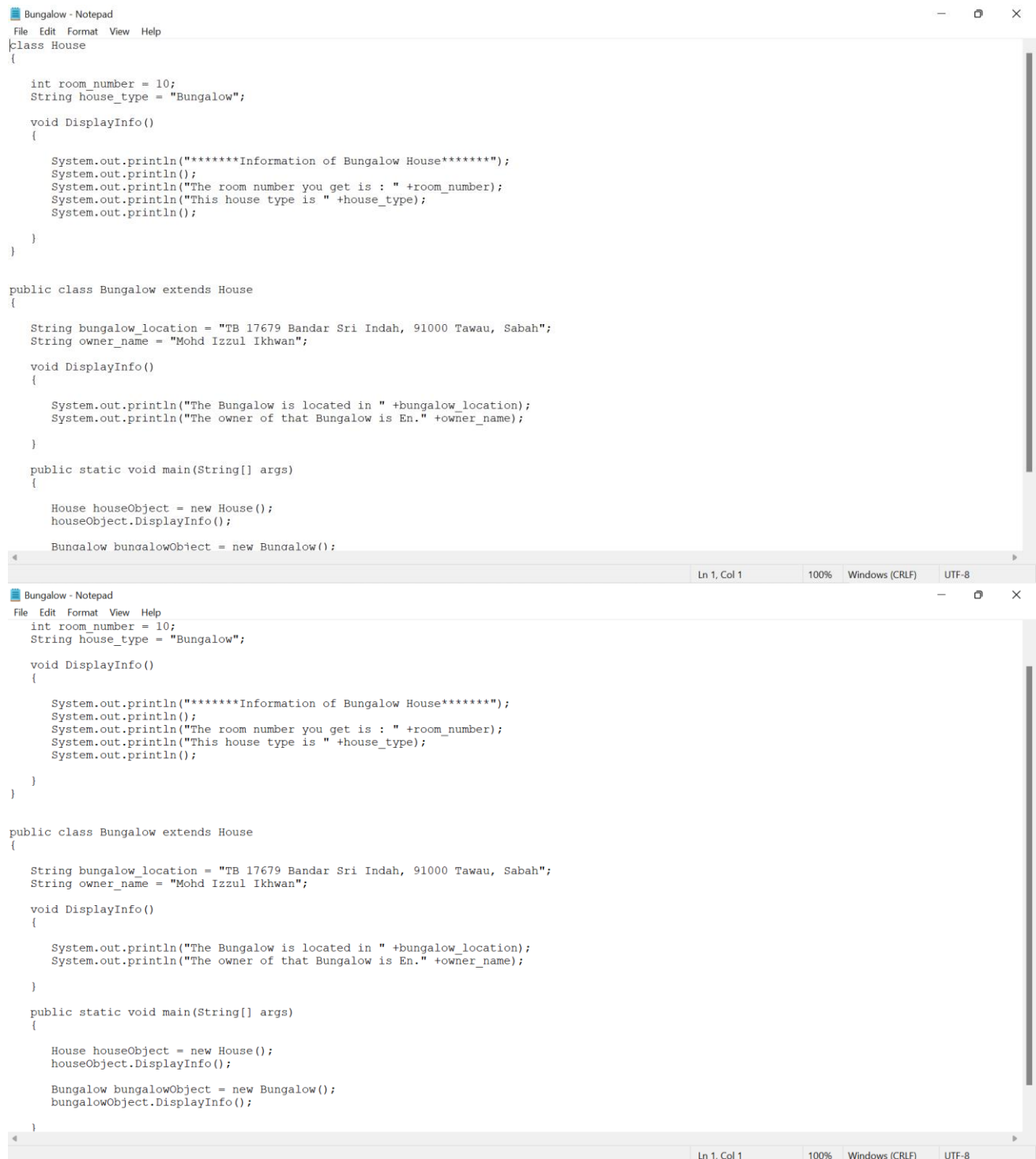
    public void does()
    {
        System.out.println();
        System.out.println("Puan Asmara teach " +subject_teaching+ " in this school.");
    }

    public static void main(String[] args)
    {
        Teacher teacherObject = new Teacher();
        teacherObject.DisplayInfo();

        teacherObject.does();
    }
}

Administrator: Command Prompt
C:\>javac Teacher.java
C:\>java Teacher
*****Information of School and Teacher*****
The school type is : High School
This school have 1000 students.
Puan Asmara teach Object Oriented Programming in this school.
C:\>
```

SOALAN 3:



The image shows a Notepad window titled "Bungalow - Notepad" with a menu bar (File, Edit, Format, View, Help). The code is as follows:

```

class House
{
    int room_number = 10;
    String house_type = "Bungalow";

    void DisplayInfo()
    {
        System.out.println("*****Information of Bungalow House*****");
        System.out.println();
        System.out.println("The room number you get is : " +room_number);
        System.out.println("This house type is " +house_type);
        System.out.println();
    }
}

public class Bungalow extends House
{
    String bungalow_location = "TB 17679 Bandar Sri Indah, 91000 Tawau, Sabah";
    String owner_name = "Mohd Izzul Ikhwan";

    void DisplayInfo()
    {
        System.out.println("The Bungalow is located in " +bungalow_location);
        System.out.println("The owner of that Bungalow is En." +owner_name);
    }

    public static void main(String[] args)
    {
        House houseObject = new House();
        houseObject.DisplayInfo();

        Bungalow bungalowObject = new Bungalow();
    }
}

```

The status bar at the bottom indicates "Ln 1, Col 1", "100%", "Windows (CRLF)", and "UTF-8".

Administrator: Command Prompt

C:\>javac Bungalow.java

C:\>java Bungalow

*****Information of Bungalow House*****

The room number you get is : 10

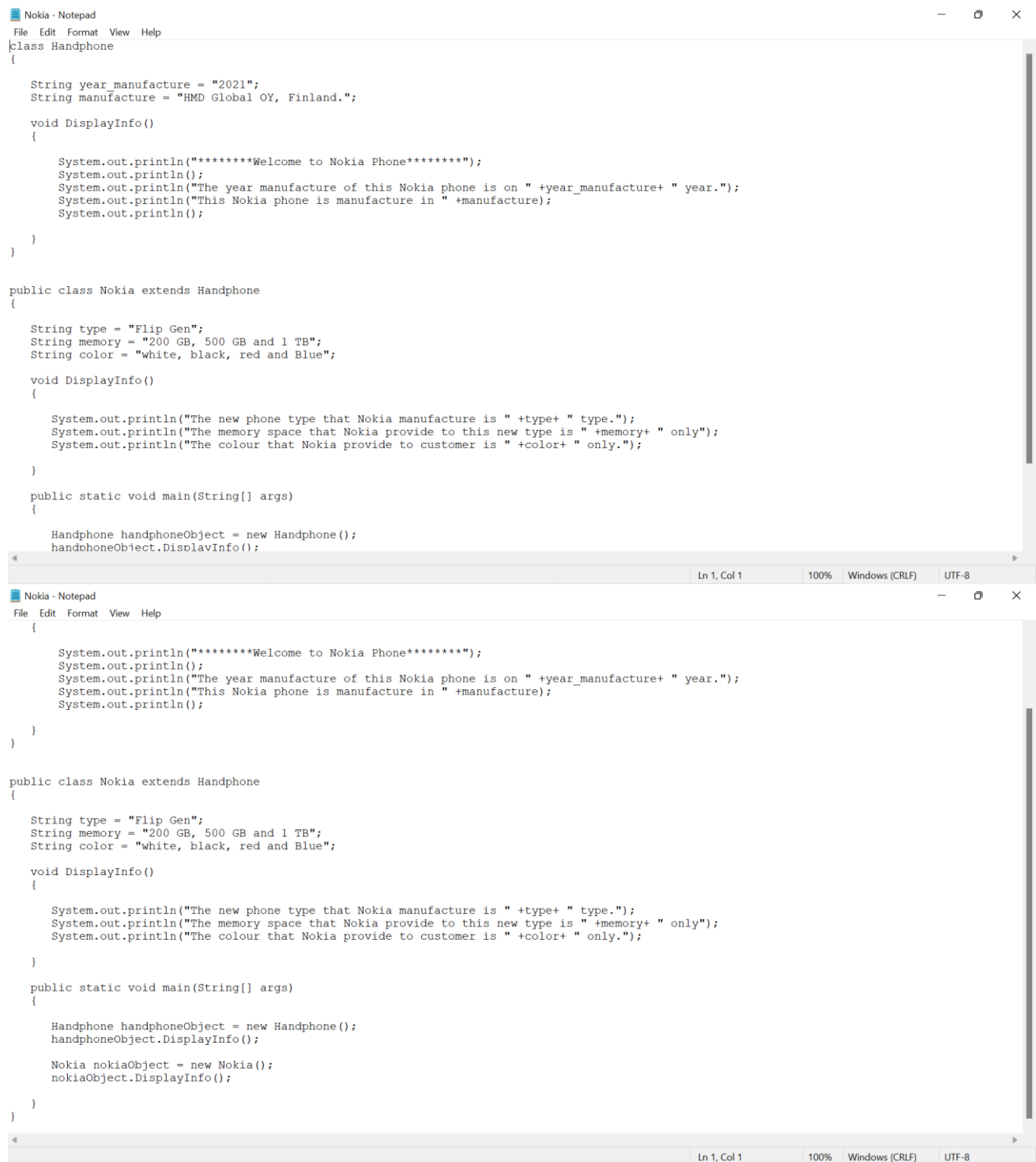
This house type is Bungalow

The Bungalow is located in TB 17679 Bandar Sri Indah, 91000 Tawau, Sabah

The owner of that Bungalow is En.Mohd Izzul Ikhwan

C:\>

SOALAN 4:



The image shows two screenshots of a Notepad application. The top screenshot displays the initial code for a Java program. The bottom screenshot shows the code after adding an instance of the Nokia class.

```

Nokia - Notepad
File Edit Format View Help
class Handphone
{
    String year_manufacture = "2021";
    String manufacture = "HMD Global OY, Finland.";

    void DisplayInfo()
    {
        System.out.println("*****Welcome to Nokia Phone*****");
        System.out.println();
        System.out.println("The year manufacture of this Nokia phone is on " +year_manufacture+ " year.");
        System.out.println("This Nokia phone is manufacture in " +manufacture);
        System.out.println();
    }
}

public class Nokia extends Handphone
{
    String type = "Flip Gen";
    String memory = "200 GB, 500 GB and 1 TB";
    String color = "white, black, red and Blue";

    void DisplayInfo()
    {
        System.out.println("The new phone type that Nokia manufacture is " +type+ " type.");
        System.out.println("The memory space that Nokia provide to this new type is " +memory+ " only");
        System.out.println("The colour that Nokia provide to customer is " +color+ " only.");
    }

    public static void main(String[] args)
    {
        Handphone handphoneObject = new Handphone();
        handphoneObject.DisplavInfo();
    }
}
Ln 1, Col 1 100% Windows (CRLF) UTF-8

```

```

Nokia - Notepad
File Edit Format View Help
{
    System.out.println("*****Welcome to Nokia Phone*****");
    System.out.println();
    System.out.println("The year manufacture of this Nokia phone is on " +year_manufacture+ " year.");
    System.out.println("This Nokia phone is manufacture in " +manufacture);
    System.out.println();
}

public class Nokia extends Handphone
{
    String type = "Flip Gen";
    String memory = "200 GB, 500 GB and 1 TB";
    String color = "white, black, red and Blue";

    void DisplayInfo()
    {
        System.out.println("The new phone type that Nokia manufacture is " +type+ " type.");
        System.out.println("The memory space that Nokia provide to this new type is " +memory+ " only");
        System.out.println("The colour that Nokia provide to customer is " +color+ " only.");
    }

    public static void main(String[] args)
    {
        Handphone handphoneObject = new Handphone();
        handphoneObject.DisplayInfo();

        Nokia nokiaObject = new Nokia();
        nokiaObject.DisplayInfo();
    }
}
Ln 1, Col 1 100% Windows (CRLF) UTF-8

```

Administrator: Command Prompt

C:\>javac Nokia.java

C:\>java Nokia

*****Welcome to Nokia Phone*****

The year manufacture of this Nokia phone is on 2021 year.
This Nokia phone is manufacture in HMD Global OY, Finland.

The new phone type that Nokia manufacture is Flip Gen type.
The memory space that Nokia provide to this new type is 200 GB, 500 GB and 1 TB only
The colour that Nokia provide to customer is white, black, red and Blue only.

C:\>