ASSIGNMENT_02_Solution

```java
/*
  1. Create a class "Room" which will hold the "height", "width" and
"breadth" of the room
  in three fields. This class also has a method "volume()" to calculate the
volume of this
  room. Create instances "Room" and display the volume of room.

*/
public class Room
{
  double width;
  double breadth;
  double height;


  void calVolume(double width, double breadth, double height)
  {
    double roomVolume = width * breadth * height;
    System.out.println("Volume of room : "+roomVolume);
  }

  public static void main(String[] args)
  {
    Room rm = new Room();
    rm.calVolume(2,3,2);
  }

}
//o/p => Volume of room : 12.0



/*
  2. Write a program to implement a class "student" with the following
members. Name of
  the student. Marks of the student obtained in three subjects. Function to
assign initial
  values. Function to compute total average. Function to display the
student's name and the
  total marks. Write an appropriate main() function to demonstrate the
functioning of the
  above.
*/
```

```java
public class Student
{
  String name;
  float avg_marks;

  Student()
  {
    name = "ABC";
    avg_marks = 90.6f;
  }

  void nameDisplay()
  {
    System.out.println("Name of the student : "+name);
  }

  void totalAverage(float sub1, float sub2, float sub3)
  {
    System.out.println("Marks of sub1 = "+sub1);
    System.out.println("Marks of sub2 = "+sub2);
    System.out.println("Marks of sub3 = "+sub3);

    float avg_marks = (sub1 + sub2 + sub3) / 3 ;

    System.out.println("Average marks of Three Subjects are : "+avg_marks);
  }

  public static void main(String[] args)
  {
    Student s = new Student();
    s.nameDisplay();
    s.totalAverage(10, 20, 30);
  }

}


/*
  3.
  Write a class "Box" that with three member-variables "height", "width" and
"breadth".
  Write suitable constructors to initialize them. Add functions like
"getVolume" and
  "getArea" that will return volume and surface area respectively.
Instantiate two arbitrary
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  boxes and then print their volume and surface area.
*/

public class Box
{
  double width,breadth,height;
  double volume;
  double area;

  void getArea(double width, double breadth, double height)
  {
      area= 2*width + 2*breadth + 2*height;
    System.out.println("Surface Area of Box : "+area);
  }

  void getVolume(double width, double breadth, double height)
  {
    volume = width * breadth * height;
    System.out.println("Volume of Box : "+volume);
  }

  public static void main(String[] args)
  {
    Box bx = new Box();

    bx.getArea(2,3,4);
    bx.getVolume(2,4,3);

  }

}
//output => Surface Area of Box : 18.0
//          Volume of Box : 24.0



/*
  4. Create a Java class Vehicle with attributes price, color, and model,
along with a
  constructor to initialize these attributes. Implement a method display()
in the Vehicle
  class to print the details of the vehicle. Create an instance of Vehicle
class, initialize it
  with values, and display its details using the display method.
*/
```

```java
public class Vehicle
{
  double price;
  String color;
  String model;

  Vehicle()
  {
    price = 50000;
    color = "Balck";
    model = "ABCDE";
  }

  Vehicle(int price1, String color1, String model1)
  {
    price = price1;
    color = color1;
    model = model1;
  }
  void displayDetails(int price, String color, String model)
  {
    System.out.println("Price = "+price);
    System.out.println("Color = "+color);
    System.out.println("Model = "+model);
  }

  public static void main(String[] args)
  {
    Vehicle v = new Vehicle();
    v.displayDetails(60000,"White","XYZABC");

  }

}
/* output =>
    Price = 60000
  Color = White
  Model = XYZABC
*/


/*
 5.
  Create a class Person with attributes age, height, and weight, along with
multiple
```

```java
  constructors to initialize these attributes. Implement a method display() in the Person
  class to print the details of a person object.
  create multiple instances of Person class using different constructors
  and display their details using the display method.
*/
public class Person
{
  int age;
  int height;
  float weight;

  Person()
  {
    age = 24;
    height = 160;
    weight = 60;
  }

  Person(int age1, int height1, float weight1)
  {
    age = age1;
    height = height1;
    weight = weight1;
  }

  void displayDetails()
  {
    System.out.println("Age of the person is : "+age);
    System.out.println("height of the person is : "+height);
    System.out.println("weight of the person is : "+weight);
  }

  public static void main(String[] args)
  {
    Person p = new Person();
    p.displayDetails();

    System.out.println("");

    Person p1 = new Person(25,140,56.0f);
    p1.displayDetails();


  }
```

```
}
/* output =>

Age of the person is : 24
height of the person is : 160
weight of the person is : 60.0

Age of the person is : 25
height of the person is : 140
weight of the person is : 56.0

*/
```