

LetsUpgrade Java Essentials Assignment - 2

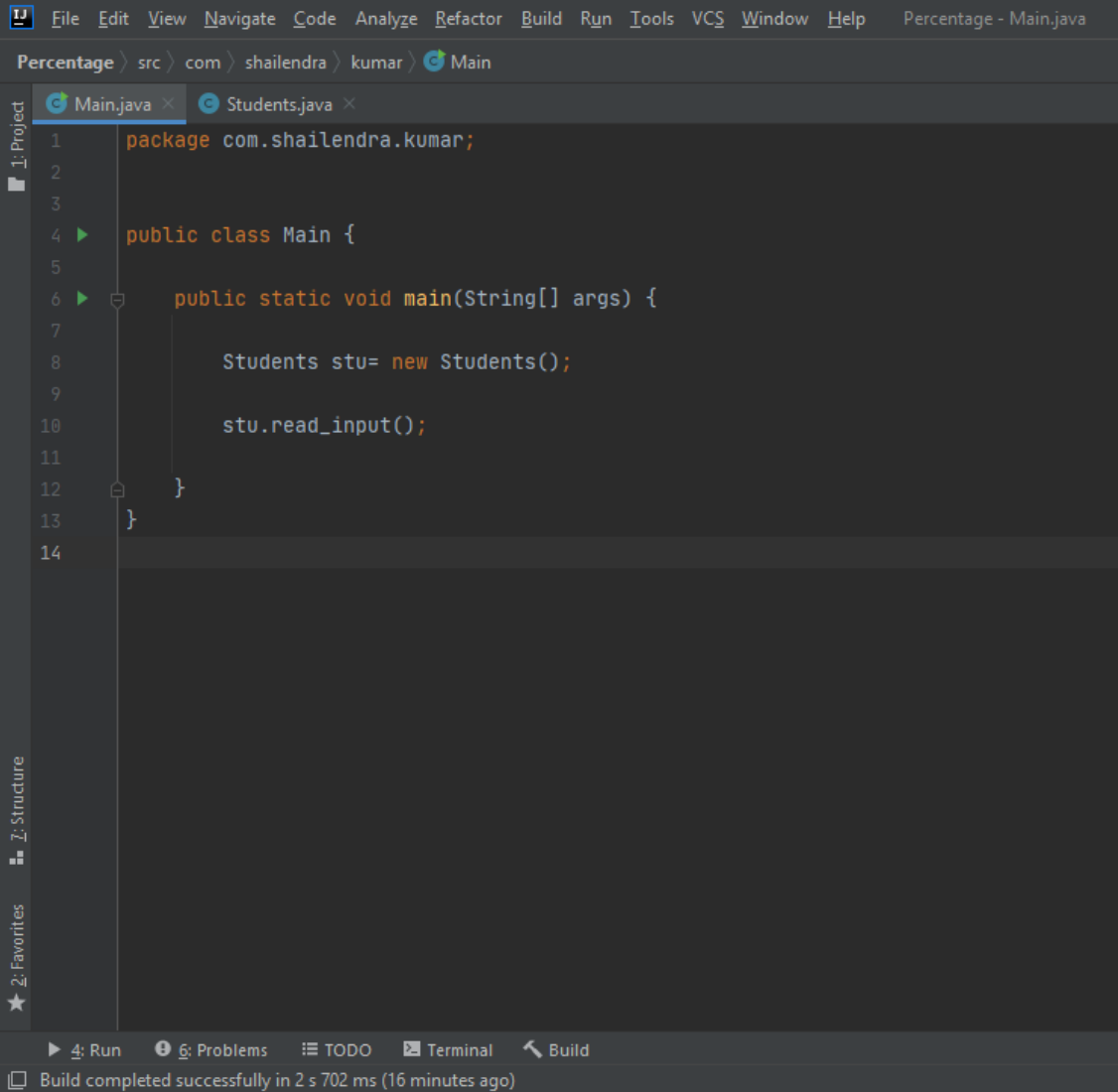
Questions 1:

Take 5 subjects marks each subject 100 marks;

Calculate the percentage;

Based on the percentage print the grade and the percentage;

Answer:



```
Percentage - Main.java
Percentage > src > com > shailendra > kumar > Main
Main.java x Students.java x
1 package com.shailendra.kumar;
2
3
4 public class Main {
5
6     public static void main(String[] args) {
7
8         Students stu= new Students();
9
10        stu.read_input();
11
12    }
13 }
14

1: Project
2: Favorites
3: Structure
4: Run
5: Problems
6: TODO
7: Terminal
8: Build
Build completed successfully in 2 s 702 ms (16 minutes ago)
```

The screenshot shows an IDE window titled "Percentage - Students.java". The breadcrumb navigation shows the path: Percentage > src > com > shailendra > kumar > Students. The left sidebar contains a "Project" view showing the file structure and a "Structure" view showing the class hierarchy. The main editor displays the following Java code:

```
1 package com.shailendra.kumar;
2
3 import java.util.Scanner;
4
5
6 public class Students {
7
8
9
10     int java,php,python,c,ruby;
11
12     public void read_input(){
13
14
15         Scanner sc = new Scanner(System.in);
16
17         System.out.println("Enter your java marks");
18         java= sc.nextInt();
19
20         System.out.println("Enter your php marks");
21         php= sc.nextInt();
22
23         System.out.println("Enter your python marks");
24         python= sc.nextInt();
25
26         System.out.println("Enter your c marks");
27         c= sc.nextInt();
28
29         System.out.println("Enter your ruby marks");
```

The bottom status bar indicates: Build completed successfully in 2 s 702 ms (16 minutes ago).

The screenshot shows an IDE window titled "Percentage - Students.java". The breadcrumb navigation shows the path: Percentage > src > com > shailendra > kumar > Students. The editor has two tabs: "Main.java" and "Students.java", with "Students.java" being the active file. The code in "Students.java" is as follows:

```
10  int java,php,python,c,ruby;
11
12  public void read_input(){
13
14      Scanner sc = new Scanner(System.in);
15
16      System.out.println("Enter your java marks");
17      java= sc.nextInt();
18
19      System.out.println("Enter your php marks");
20      php= sc.nextInt();
21
22      System.out.println("Enter your python marks");
23      python= sc.nextInt();
24
25      System.out.println("Enter your c marks");
26      c= sc.nextInt();
27
28      System.out.println("Enter your ruby marks");
29      ruby= sc.nextInt();
30
31      float total_marks=500;
32      float sub_marks= java+php+python+c+ruby;
33
34      float percentage = (sub_marks/total_marks)*100;
35
36      System.out.println("Your Percentage is = "+percentage+"%");
37
```

The IDE interface includes a menu bar (File, Edit, View, Navigate, Code, Analyze, Refactor, Build, Run, Tools, VCS, Window, Help) and a sidebar with "Project", "Structure", and "Favorites" views. At the bottom, a status bar indicates "Build completed successfully in 2 s 702 ms (17 minutes ago)".

The screenshot shows an IDE window titled "Percentage - Students.java". The menu bar includes File, Edit, View, Navigate, Code, Analyze, Refactor, Build, Run, Tools, VCS, Window, and Help. The breadcrumb navigation shows the path: Percentage > src > com > shailendra > kumar > Students. The left sidebar has three panels: "1: Project" showing a file tree with "Main.java" and "Students.java", "2: Structure" showing a class diagram, and "3: Favorites" with a star icon. The main editor displays the code for "Students.java". The code calculates the percentage based on marks in Java, PHP, Python, C, and Ruby, and then prints the corresponding grade (A, B, C, or D) based on the percentage range. The status bar at the bottom shows "4: Run", "5: Problems", "6: TODO", "Terminal", and "Build". A message at the bottom states: "Build completed successfully in 2 s 702 ms (18 minutes ago)".

```
Percentage > src > com > shailendra > kumar > Students

Main.java x Students.java x

30  Ruby= sc.nextInt();
31
32  float total_marks=500;
33  float sub_marks= java+php+python+c+ruby;
34
35  float percentage = (sub_marks/total_marks)*100;
36
37  System.out.println("Your Percentage is = "+percentage+"%");
38
39  if (percentage>=90){
40
41      System.out.println("Your grade is A");
42  }
43  else if (percentage>=75 && percentage<90){
44
45      System.out.println("Your grade is B");
46  }
47  else if (percentage>=60 && percentage<75){
48
49      System.out.println("Your grade is C");
50  }
51  else if (percentage<60){
52
53      System.out.println("Your grade is D");
54  }
55  }
56  }
57  |

4: Run 5: Problems 6: TODO Terminal Build
Build completed successfully in 2 s 702 ms (18 minutes ago)
```

The screenshot displays the IntelliJ IDEA IDE interface. The top menu bar includes File, Edit, View, Navigate, Code, Analyze, Refactor, Build, Run, Tools, VCS, Window, and Help. The breadcrumb navigation shows the path: Percentage > src > com > shailendra > kumar > Students > read_input. The editor window has two tabs: Main.java and Students.java. The Students.java file contains the following Java code:

```
34  
35     float percentage = (sub_marks/total_marks)*100;  
36  
37     System.out.println("Your Percentage is = "+percentage+"%");  
38  
39     if (percentage>=90){  
40  
41         System.out.println("Your grade is A");  
42     }  
43     else if (percentage>=75 && percentage<90){
```

Below the editor is the Run console. It shows the command: `D:\Java\jdk-11.0.1\bin\java.exe "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA 2020.` The program's output is as follows:

```
Enter your java marks  
75  
Enter your php marks  
79  
Enter your python marks  
73  
Enter your c marks  
71  
Enter your ruby marks  
89  
Your Percentage is = 77.4%  
Your grade is B  
  
Process finished with exit code 0
```

The bottom status bar indicates: Build completed successfully in 7 s 389 ms (a minute ago).

Questions 2:

Take employee name, date of birth, month of birth, year of birth, monthly salary;

51 - 20%;

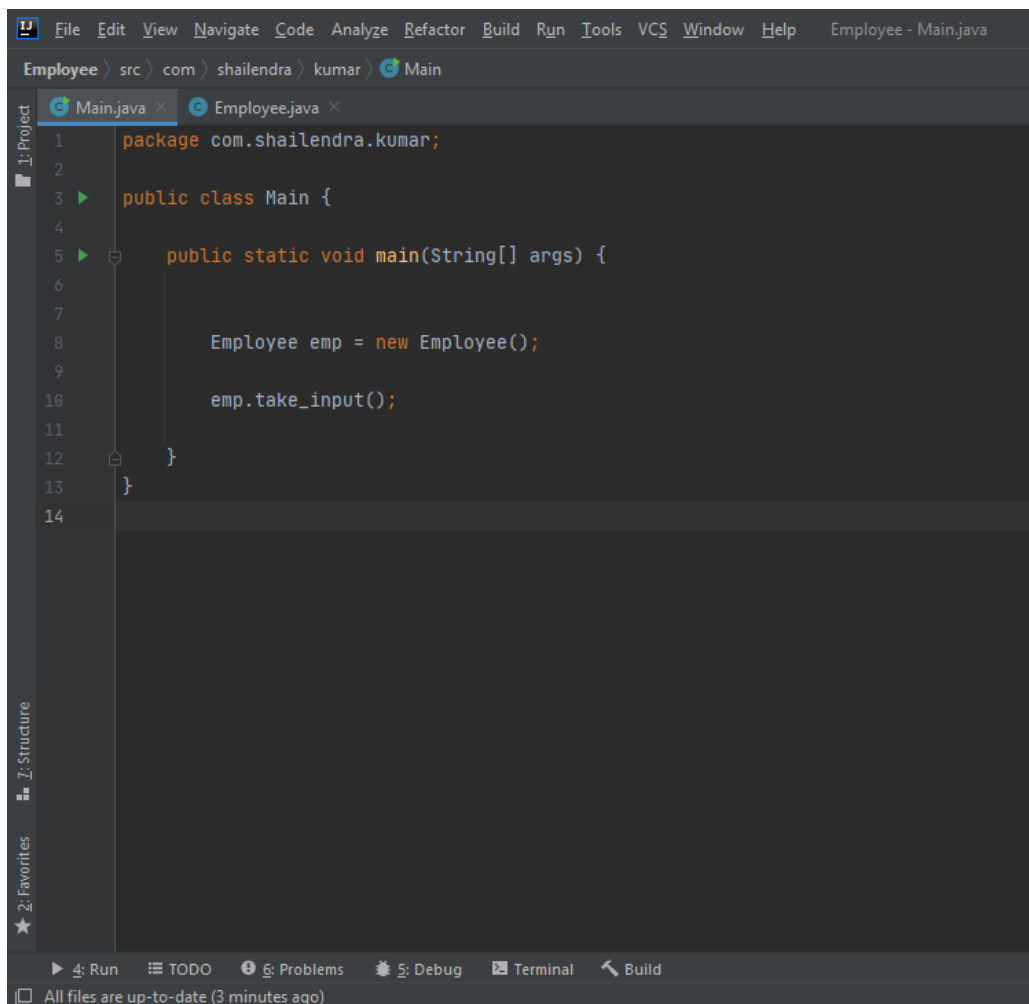
41 - 15%;

31- 10%;

21 -5%;

Display name, age, annual salary and the tax amount

Answer:



```
Employee > src > com > shailendra > kumar > Main
Main.java x Employee.java x
1 package com.shailendra.kumar;
2
3 public class Main {
4
5     public static void main(String[] args) {
6
7         Employee emp = new Employee();
8
9         emp.take_input();
10
11     }
12 }
13
14
4: Run 6: Problems 5: Debug Terminal Build
All files are up-to-date (3 minutes ago)
```

The screenshot shows an IDE window titled "Employee - Employee.java". The menu bar includes File, Edit, View, Navigate, Code, Analyze, Refactor, Build, Run, Tools, VCS, Window, and Help. The breadcrumb navigation shows the path: Employee > src > com > shailendra > kumar > Employee > take_input. The editor has two tabs: Main.java and Employee.java. The code in Employee.java is as follows:

```
1 package com.shailendra.kumar;
2
3 import java.util.Scanner;
4
5 public class Employee {
6
7     String emp_name;
8     int emp_bdate, emp_bmonth, emp_byear;
9     double emp_salary, tax;
10
11     public void take_input(){
12
13         Scanner sc= new Scanner(System.in);
14
15         System.out.println("Enter your name");
16         emp_name=sc.next();
17
18         System.out.println("Enter your date of birth");
19         emp_bdate=sc.nextInt();
20
21         System.out.println("Enter your month of birth");
22         emp_bmonth=sc.nextInt();
23
24         System.out.println("Enter your year of birth");
25         emp_byear=sc.nextInt();
26
27         System.out.println("Enter your monthly salary");
28         emp_salary=sc.nextDouble();
29     }
```

The left sidebar shows a project view with "1: Project" and "2: Favorites". The bottom status bar indicates "Build completed successfully in 3 s 111 ms (3 minutes ago)".

```
Employee > src > com > shailendra > kumar > Employee > take_input  
Main.java x Employee.java x  
27 System.out.println("Enter your monthly salary");  
28 emp_salary=sc.nextDouble();  
29  
30 int day= 12-emp_bdate;  
31 int month= 10-emp_bmonth;  
32 int year= 2020-emp_byear;  
33  
34 double salary=emp_salary*12;  
35  
36  
37 if (salary < 200000) {  
38     tax = 0;  
39 }  
40  
41 else if (salary >= 200000 && salary < 300000) {  
42     tax = (salary- 200000)/5+10000;  
43 }  
44  
45 else if (salary >= 300000 && salary <400000) {  
46     tax = (salary - 300000)/10+30000;  
47 }  
48  
49 else if (salary >= 400000 && salary <500000) {  
50     tax = (salary - 400000)/15+60000;  
51 }  
52  
53 else {  
54     tax = (salary - 500000)/20+100000;  
55 }
```

4: Run 6: Problems 5: Debug Terminal Build

Build completed successfully in 3 s 111 ms (4 minutes ago)

The screenshot shows an IDE window with the following components:

- Menu Bar:** File, Edit, View, Navigate, Code, Analyze, Refactor, Build, Run, Tools, VCS, Window, Help.
- Breadcrumb:** Employee > src > com > shailendra > kumar > Employee > take_input
- Tab Bar:** Main.java, Employee.java
- Editor:** Contains Java code for calculating tax based on salary.
- Left Sidebar:** 1: Project, 2: Structure, 3: Favorites.
- Bottom Bar:** 4: Run, 5: TODO, 6: Problems, 7: Debug, 8: Terminal, 9: Build.
- Status Bar:** Build completed successfully in 3 s 111 ms (4 minutes ago)

```
36
37     if (salary < 200000) {
38         tax = 0;
39     }
40
41     else if (salary >= 200000 && salary < 300000) {
42         tax = (salary- 200000)/5+10000;
43     }
44
45     else if (salary >= 300000 && salary <400000) {
46         tax = (salary - 300000)/10+30000;
47     }
48
49     else if (salary >= 400000 && salary <500000) {
50         tax = (salary - 400000)/15+60000;
51     }
52
53     else {
54         tax = (salary - 500000)/20+100000;
55     }
56
57     System.out.println("Your name is "+emp_name);
58     System.out.println("Your age is "+year+", "+month+"month and "+day+"day");
59     System.out.println("Your annual salary is "+salary);
60     System.out.println("The tax amount is "+tax);
61
62 }
63 }
```

The screenshot displays the IntelliJ IDEA IDE interface. The top menu bar includes File, Edit, View, Navigate, Code, Analyze, Refactor, Build, Run, Tools, VCS, Window, and Help. The breadcrumb navigation shows the path: Employee > src > com > shailendra > kumar > Employee > take_input. The left sidebar contains the Project, Structure, and Favorites tool windows. The main editor window shows the file Employee.java with the following code snippet:

```
36
37     if (salary < 200000) {
38         tax = 0;
39     }
```

Below the editor, the Run tab is active, showing the execution of the program. The command line is: D:\Java\jdk-11.0.1\bin\java.exe "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA 2020...". The output of the program is as follows:

```
Enter your name
dhoni
Enter your date of birth
07
Enter your month of birth
07
Enter your year of birth
1981
Enter your monthly salary
26000
Your name is dhoni
Your age is 39,3month and 5day
Your annual salary is =312000.0
The tax amount is =31200.0

Process finished with exit code 0
```

The bottom status bar indicates: Build completed successfully in 2 s 908 ms (a minute ago).

By Shailendra Kumar

Part of LetsUpgrade Family