



Main.java

Output



```
1 import java.util.Scanner;
2
3 abstract class Student {
4     protected int studentId;
5     protected String studentName;
6     protected String department;
7     protected String gender;
8     protected String category;
9     protected double collegeFee;
10
11     public Student(int studentId,
12                    String studentName, String
13                    department, String gender,
14                    String category, double
15                    collegeFee) {
16         this.studentId = studentId
17             ;
18         this.studentName =
19             studentName;
20         this.department =
21             department;
22         this.gender = gender;
23         this.category = category;
24         this.collegeFee =
25             collegeFee;
```

Run



Main.java

Output



```
collegeFee;  
  
18     }  
19  
20     public abstract double  
        calculateTotalFee();  
21  
22     // Getters and setters  
23     public int getStudentId() {  
24         return studentId;  
25     }  
26  
27     public void setStudentId(int  
        studentId) {  
28         this.studentId = studentId  
        ;  
29     }  
30  
31     public String getStudentName()  
        {  
32         return studentName;  
33     }  
34  
35     public void setStudentName  
        (String studentName) {  
36         this.studentName =  
        studentName;
```

Run



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Output



```
37     }
38
39     public String getDepartment()
40     {
41         return department;
42     }
43
44     public void setDepartment
45     (String department) {
46         this.department =
47         department;
48     }
49
50     public String getGender() {
51         return gender;
52     }
53
54     public void setGender(String
55     gender) {
56         this.gender = gender;
57     }
```

Run



Main.java

Output



```
59 ▾ public void setCategory(String
      category) {
60     this.category = category;
61 }
62
63 ▾ public double getCollegeFee()
      {
64     return collegeFee;
65 }
66
67 ▾ public void setCollegeFee
      (double collegeFee) {
68     this.collegeFee =
        collegeFee;
69 }
70 }
71
72 ▾ class Hosteller extends Student {
73     private int roomNumber;
74     private char blockName;
75     private String roomType;
76
77 ▾ public Hosteller(int studentId
        , String studentName,
        String department,
        String gender, String category,
```

Run



Main.java

Output



```
gender, String category,  
double collegeFee,  
78 int  
roomNumber, char  
blockName, String  
roomType) {  
79 super(studentId,  
studentName,  
department, gender,  
category, collegeFee);  
80 this.roomNumber =  
roomNumber;  
81 this.blockName = blockName  
;  
82 this.roomType = roomType;  
83 }  
84  
85 @Override  
86 public double  
calculateTotalFee() {  
87 double hostelFee;  
88 if (blockName == 'A') {  
89 hostelFee = roomType  
.equals("AC") ?  
60000 : 40000;  
90 } else if (blockName ==
```

Run



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Output



```

    'B') {
91         hostelFee = roomType
            .equals("AC") ?
                50000 : 5000;
92     } else {
93         hostelFee = roomType
            .equals("AC") ?
                40000 : 2500;
94     }
95     return collegeFee +
        hostelFee + (roomType
            .equals("AC") ? 8000 :
                0);
96 }
97
98 // Getters and setters
99 public int getRoomNumber() {
100     return roomNumber;
101 }
102
103 public void setRoomNumber(int
    roomNumber) {
104     this.roomNumber =
        roomNumber;
105 }
106
```

Run



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Output



```
107 public char getBlockName() {
108     return blockName;
109 }
110
111 public void setBlockName(char
    blockName) {
112     this.blockName = blockName
        ;
113 }
114
115 public String getRoomType() {
116     return roomType;
117 }
118
119 public void setRoomType(String
    roomType) {
120     this.roomType = roomType;
121 }
122 }
123
124 class DayScholar extends Student {
125     private int busNumber;
126     private float distance;
127
128     public DayScholar(int
```

Run



Main.java

Output



```
studentId, String
studentName, String
department, String gender,
String category, double
collegeFee,
129 int
        busNumber, float
        distance) {
130 super(studentId,
        studentName,
        department, gender,
        category, collegeFee);
131 this.busNumber = busNumber
        ;
132 this.distance = distance;
133 }
134
135 @Override
136 public double
        calculateTotalFee() {
137 double busFee;
138 if (distance > 30 &&
        distance <= 40) {
139 busFee = 28000
140 } else if (distance > 20
```

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```
143         busFee = 12000;
144     } else {
145         busFee = 6000;
146     }
147     return collegeFee + busFee
        ;
148 }
149
150 // Getters and setters
151 public int getBusNumber() {
152     return busNumber;
153 }
154
155 public void setBusNumber(int
    busNumber) {
156     this.busNumber = busNumber
        ;
157 }
158
159 public float getDistance() {
160     return distance;
161 }
162
163 public void setDistance(
    distance) {
```

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```
164         this.distance = distance;
165     }
166 }
167
168 public class UserInterface {
169     public static void main
        (String[] args) {
170         Scanner scanner = new
            Scanner(System.in);
171
172         System.out.println("Enter
            Student Id");
173         int studentId = scanner
            .nextInt();
174         scanner.nextLine(); //
            Consume newline
175         System.out.println("Enter
            Student name");
176         String studentName =
            scanner.nextLine();
177         System.out.println("Enter
            Department name");
178         String department =
            scanner.nextLi
179         System.out.println("Enter
```

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```
gender");  
180 String gender = scanner  
      .nextLine();  
181 System.out.println("Enter  
      category");  
182 String category = scanner  
      .nextLine();  
183 System.out.println("Enter  
      College fee");  
184 double collegeFee =  
      scanner.nextDouble();  
185 scanner.nextLine(); //  
      Consume newline  
186  
187 if (category.equals  
      ("Hosteller")) {  
188     System.out.println  
          ("Enter the room  
              number");  
189     int roomNumber =  
          scanner.nextInt();  
190     scanner.nextLine(); //  
          Consume newline  
191     System.out.println  
          ("Enter the  
              name");
```

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192

```
        name");  
        char blockName =  
            scanner.next  
                ().charAt(0);
```

193

```
        scanner.nextLine(); //  
        Consume newline
```

194

```
        System.out.println  
            ("Enter the room  
            type");
```

195

```
        String roomType =  
            scanner.nextLine  
                ();
```

196

197

```
        Hosteller hosteller =  
            new Hosteller  
                (studentId,  
                studentName,  
                department, gender  
                , category,  
                collegeFee,  
                roomNumber,  
                blockName,  
                roomType);
```

198

```
        System.out.print  
            ("Total College
```

Run



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Output



```
        ("Total College  
fee is " +  
hosteller  
.calculateTotalFee  
());  
199 } else if (category.equals  
("DayScholar")) {  
200 System.out.println  
("Enter Bus  
number");  
201 int busNumber =  
scanner.nextInt();  
202 System.out.println  
("Enter the  
distance");  
203 float distance =  
scanner.nextFloat  
();  
204  
205 DayScholar dayScholar  
= new DayScholar  
(studentId,  
studentName,  
department, gender  
, category  
collegeFee,
```

Run



Main.java

Output



204

205

```
DayScholar dayScholar
= new DayScholar
(studentId,
studentName,
department, gender
, category,
collegeFee,
busNumber,
distance);
```

206

```
System.out.println
("Total College
fee is " +
dayScholar
.calculateTotalFee
());
```

207 ▾

```
} else {
```

208

```
System.out.println
("Invalid
category");
```

209

```
}
```

210

211

```
scanner.close();
```

212

```
}
```

213

```
}
```

214

Run

6:46

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Main.java

Output



```
java -cp /tmp/hwUhvH0xwb/UserInterface
```

Enter Student Id

101

Enter Student name

reni fetina

Enter Department name

cse

Enter gender

female

Enter category

good

Enter College fee

50000

Invalid category

=== Code Execution Successful ===