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1 public class Policy {
2     // Fields
3     private int policyNumber;CSC151Project
4     private String providerName;
5     private String policyholderFirstName;
6     private String policyholderLastName;
7     private int policyholderAge;
8     private String smokingStatus;
9     private double policyholderHeight;
10    private double policyholderWeight;
11
12    // No-arg constructor (default values)
13    public Policy() {
14        policyNumber = 0;
15        providerName = "";
16        policyholderFirstName = "";
17        policyholderLastName = "";
18        policyholderAge = 0;
19        smokingStatus = "non-smoker";
20        policyholderHeight = 0;
21        policyholderWeight = 0;
22    }
23
24    // Constructor that accepts arguments
25    public Policy(int policyNumber, String providerName, String policyholderFirstName
, String policyholderLastName,
26                int policyholderAge, String smokingStatus, double policyholderHeigh
t, double policyholderWeight) {
27        this.policyNumber = policyNumber;
28        this.providerName = providerName;
29        this.policyholderFirstName = policyholderFirstName;
30        this.policyholderLastName = policyholderLastName;
31        this.policyholderAge = policyholderAge;
32        this.smokingStatus = smokingStatus;
33        this.policyholderHeight = policyholderHeight;
34        this.policyholderWeight = policyholderWeight;
35    }
36
37    // Setters and Getters
38    public int getPolicyNumber() {
39        return policyNumber;
40    }
41
42    public void setPolicyNumber(int policyNumber) {
43        this.policyNumber = policyNumber;
44    }
45
46    public String getProviderName() {
47        return providerName;
48    }
49
50    public void setProviderName(String providerName) {
51        this.providerName = providerName;
52    }
53
54    public String getPolicyholderFirstName() {
55        return policyholderFirstName;
56    }

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57
58 public void setPolicyholderFirstName(String policyholderFirstName) {
59     this.policyholderFirstName = policyholderFirstName;
60 }
61
62 public String getPolicyholderLastName() {
63     return policyholderLastName;
64 }
65
66 public void setPolicyholderLastName(String policyholderLastName) {
67     this.policyholderLastName = policyholderLastName;
68 }
69
70 public int getPolicyholderAge() {
71     return policyholderAge;
72 }
73
74 public void setPolicyholderAge(int policyholderAge) {
75     this.policyholderAge = policyholderAge;
76 }
77
78 public String getSmokingStatus() {
79     return smokingStatus;
80 }
81
82 public void setSmokingStatus(String smokingStatus) {
83     this.smokingStatus = smokingStatus;
84 }
85
86 public double getPolicyholderHeight() {
87     return policyholderHeight;
88 }
89
90 public void setPolicyholderHeight(double policyholderHeight) {
91     this.policyholderHeight = policyholderHeight;
92 }
93
94 public double getPolicyholderWeight() {
95     return policyholderWeight;
96 }
97
98 public void setPolicyholderWeight(double policyholderWeight) {
99     this.policyholderWeight = policyholderWeight;
100 }
101
102 // Method to calculate BMI
103 public double calculateBMI() {
104     return (policyholderWeight * 703) / (policyholderHeight * policyholderHeight)
105 ;
106 }
107
108 // Method to calculate policy price
109 public double calculatePolicyPrice() {
110     double baseFee = 600;
111     double additionalFee = 0;
112
113     if (policyholderAge > 50) {
114         additionalFee += 75;
115     }
116 }
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114     }
115     if (smokingStatus.equalsIgnoreCase("smoker")) {
116         additionalFee += 100;
117     }
118     double bmi = calculateBMI();
119     if (bmi > 35) {
120         additionalFee += (bmi - 35) * 20;
121     }
122
123     return baseFee + additionalFee;
124 }
125
126 // toString method to display policy information
127 @Override
128 public String toString() {
129     return "Policy Number: " + policyNumber + "\n" +
130         "Provider Name: " + providerName + "\n" +
131         "Policyholder's First Name: " + policyholderFirstName + "\n" +
132         "Policyholder's Last Name: " + policyholderLastName + "\n" +
133         "Policyholder's Age: " + policyholderAge + "\n" +
134         "Policyholder's Smoking Status: " + smokingStatus + "\n" +
135         "Policyholder's Height: " + policyholderHeight + " inches\n" +
136         "Policyholder's Weight: " + policyholderWeight + " pounds\n" +
137         "Policyholder's BMI: " + String.format("%.2f", calculateBMI()) + "\n"
138     +
139         "Policy Price: $" + String.format("%.2f", calculatePolicyPrice());
140 }

```