```java
import java.util.*;

public class Main {
    private static final double BASE_FEE = 100000.0;
    private static final double FULL_SCHOLARSHIP_THRESHOLD = 500000.0;
    private static final double PARTIAL_SCHOLARSHIP_THRESHOLD = 1000000.0;
    private static final double PARTIAL_SCHOLARSHIP_PERCENTAGE = 0.5;
    private static final double DISCOUNT_THRESHOLD = 1000000.0;
    private static final double DISCOUNT_PERCENTAGE = 0.15;

    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);

        System.out.println("Welcome to Head Start University!");

        System.out.print("Is the student Indian? (yes/no): ");
        String isIndian = scanner.nextLine().toLowerCase();

        System.out.print("Enter student's age : ");
        int age = scanner.nextInt();

        System.out.print("Has the student been involved in any acts of violence? (yes/no): ");
```

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23          String hasViolenceHistoryStr =
    scanner.next().toLowerCase();
24          boolean hasViolenceHistory =
    hasViolenceHistoryStr.equals("yes");
25
26          System.out.print("Enter student's
    percentage in 10th board exams: ");
27          double tenthPercentage = scanner.
    nextDouble();
28
29          System.out.print("Enter student's
    percentage in 12th board exams: ");
30          double twelfthPercentage = scanner.
    nextDouble();
31
32          System.out.print("Does any immediate
    family member work at the university? (yes/no
    ): ");
33          String hasFamilyMemberWorkingStr =
    scanner.next().toLowerCase();
34          boolean hasFamilyMemberWorking =
    hasFamilyMemberWorkingStr.equals("yes");
35
36          double familyIncome = 0.0;
37          if (isIndian.equals("yes")) {
38              System.out.print("Enter student's
     annual family income: ");
39              familyIncome = scanner.nextDouble
    ();
40          }
41
42          boolean isEligible = checkEligibility
    (age, hasViolenceHistory, tenthPercentage,
    twelfthPercentage,
43                  hasFamilyMemberWorking,
```

```
43 isIndian, familyIncome);
44
45          if (!isEligible) {
46              System.out.println("We appreciate
    your interest in Head Start University.
   However, we regret to inform you that we are
   unable to accommodate your request at this
   time.");
47              System.out.println("We wish you
   the best of luck for your future endeavors."
   );
48              System.exit(0);
49          }
50
51          System.out.println("Congratulations!
   You have been admitted to Head Start
   University.");
52
53          double fees = calculateFees(isIndian
   , familyIncome);
54
55          if (fees == 0) {
56              System.out.println("You have been
    awarded a full scholarship.");
57          } else if (fees < BASE_FEE) {
58              System.out.println("You have been
    awarded a partial scholarship.");
59              System.out.println("Your fees for
    the first year will be: Rs. " + fees);
60          } else {
61              System.out.println("Your fees for
    the first year will be: Rs. " + fees);
62          }
63
64          System.out.println("Please choose any
```

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64  three areas of interest from the following:"
   );
65          List<String> topics = Arrays.asList("
   Education", "Technology", "Research", "Art",
   "Music",
66                  "Technology and Research", "
   Pharmacy", "Literature", "Film Making");
67          for (int i = 0; i < topics.size(); i
   ++) {
68              System.out.println((i + 1) + ". "
    + topics.get(i));
69          }
70
71          System.out.print("Enter your first
   choice (1-9): ");
72          int firstChoice = scanner.nextInt();
73          String program = getProgramByChoice(
   firstChoice);
74
75          if (program != null) {
76              System.out.println("
   Congratulations! You have been admitted to
   the " + program + " program.");
77
78              System.out.print("Enter student's
    name: ");
79              String studentName = scanner.next
   ();
80
81              System.out.print("Enter student's
    school: ");
82              String school = scanner.next();
83
84              System.out.print("Enter student's
    parent's name: ");
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```
 85             String parentName = scanner.next
    ();
 86
 87             int rollNumber =
    generateRollNumber();
 88
 89             System.out.println("\nAdmission
    Details:");
 90             System.out.println("Name: " +
    studentName);
 91             System.out.println("School: " +
    school);
 92             System.out.println("Parent's
    Name: " + parentName);
 93             System.out.println("Roll Number
    : " + rollNumber);
 94         } else {
 95             System.out.println("We regret to
     inform you that your first choice is not
    available.");
 96             System.out.print("Enter your
    second choice (1-9): ");
 97             int secondChoice = scanner.
    nextInt();
 98             program = getProgramByChoice(
    secondChoice);
 99
100             if (program != null) {
101                 System.out.println("
    Congratulations! You have been admitted to
    the " + program + " program.");
102                 // Rest of the admission
    process
103             } else {
104                 System.out.println("We
```

```
104 regret to inform you that your second choice
     is not available.");
105                 System.out.print("Enter your
     third choice (1-9): ");
106                 int thirdChoice = scanner.
    nextInt();
107                 program = getProgramByChoice
    (thirdChoice);
108
109                 if (program != null) {
110                     System.out.println("
    Congratulations! You have been admitted to
    the " + program + " program.");
111                     // Rest of the admission
     process
112                 } else {
113                     System.out.println("We
    appreciate your interest in Head Start
    University. However, we regret to inform you
     that we are unable to accommodate your
    request at this time.");
114                     System.out.println("We
    wish you the best of luck for your future
    endeavors.");
115                 }
116             }
117         }
118     }
119
120     private static boolean checkEligibility(
    int age, boolean hasViolenceHistory, double
    tenthPercentage,
121
    double twelfthPercentage, boolean
    hasFamilyMemberWorking,
```

```
122
    String isIndian, double familyIncome) {
123         if (hasViolenceHistory ||
    tenthPercentage < 75 || twelfthPercentage <
    75) {
124             return false;
125         }
126
127         return (hasFamilyMemberWorking &&
    checkPayScaleAboveThreshold() || !
    hasFamilyMemberWorking)
128                 && (isIndian.equals("no"
    ) || familyIncome >=
    FULL_SCHOLARSHIP_THRESHOLD);
129     }
130
131     private static boolean
    checkPayScaleAboveThreshold() {
132         return true;
133     }
134
135     private static double calculateFees(
    String isIndian, double familyIncome) {
136         if (isIndian.equals("no")) {
137             return BASE_FEE;
138         }
139
140         if (familyIncome <
    FULL_SCHOLARSHIP_THRESHOLD) {
141             return 0.0;
142         } else if (familyIncome <
    PARTIAL_SCHOLARSHIP_THRESHOLD) {
143             return BASE_FEE * (1 -
    PARTIAL_SCHOLARSHIP_PERCENTAGE);
144         } else if (familyIncome <
```

```
144 DISCOUNT_THRESHOLD) {
145             return BASE_FEE * (1 -
    DISCOUNT_PERCENTAGE);
146         } else {
147             return BASE_FEE;
148         }
149     }
150
151     private static int generateRollNumber
    () {
152         return new Random().nextInt(10000
    ) + 1;
153     }
154
155     private static String getProgramByChoice
    (int choice) {
156         switch (choice) {
157             case 1:
158                 return "Education";
159             case 2:
160                 return "Technology";
161             case 3:
162                 return "Research";
163             case 4:
164                 return "Art";
165             case 5:
166                 return "Music";
167             case 6:
168                 return "Technology and
    Research";
169             case 7:
170                 return "Pharmacy";
171             case 8:
172                 return "Literature";
173             case 9:
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174                     return "Film Making";
175                 default:
176                     return null;
177             }
178         }
179 }
180
```