SERVIÇO PÚBLICO FEDERAL · MINISTÉRIO DA EDUCAÇÃO
UNIVERSIDADE FEDERAL DE VIÇOSA · UFV
CAMPUS FLORESTAL

Atividade prática 01 java

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1. Exercício

```
0 import java.util.Scanner;
1 public class Exercicio-1{
2   public static void main(String [] args){
3     Scanner input = new Scanner(System.in);
4     System.out.print("Type your birthyear:");
5     int birth = input.nextInt();
6     System.out.print("Type the corrent year:");
7     int corrent_year= input.nextInt();
8     int age = corrent_year - birth;
9     System.out.printf("You have %d years\n", age);
10   }
11 }
```

2. Exercício

```
0 import java.util.Scanner;
1  public class Exercicio-2{
2    public static void main(String [] args){
3      Scanner input = new Scanner(System.in);
4      System.out.print("\n Type a racional number:");
5      double racional = input.nextDouble();
6      int real = ((int)racional);
7      double check = racional - real;
8      if (check != 0){
9        System.out.printf("\n %d \n",real);
10     } else {
11       System.out.print("\n Warning: Denominator = 0\n");
12     }
13   }
14  }
```

3. Exercício

```
0 import java.util.Scanner;
1
2 public class Exercicio-3{
3
4   public static void main(String[] args) {
```

```
 5    Scanner input = new Scanner(System.in);
 6    System.out.print("Type your wage:");
 7    float wage = input.nextInt();
 8    System.out.print("loan amount:");
 9    float loan = input.nextInt();
10     float maxLoan = wage * 0.3f;
11     if (loan < maxLoan) {
12       System.out.printf("Loan of R$ %.2f Accepted\n", loan);
13     } else {
14       System.out.printf("Loan of R$ %.2f declined\n", loan);
15     }
16   }
17 }
```

4. Exercício

```
 0 import java.util.Scanner;
 1
 2 public class Exercicio-4{
 3
 4   public static void main(String[] args) {
 5     Scanner input = new Scanner(System.in);
 6     System.out.print("Type a month:");
 7     String month = input.nextLine().toLowerCase();
 8     switch (month) {
 9       case "january":
10         System.out.println("1");
11         break;
12       case "february":
13         System.out.println("2");
14         break;
15       case "march":
16         System.out.println("3");
17         break;
18       case "april":
19         System.out.println("4");
20         break;
21       case "may":
22         System.out.println("5");
23         break;
24       case "june":
25         System.out.println("6");
26         break;
27       case "july":
```

```
28        System.out.println("7");
29        break;
30      case "august":
31        System.out.println("8");
32        break;
33      case "september":
34        System.out.println("9");
35        break;
36      case "october":
37        System.out.println("10");
38        break;
39      case "november":
40        System.out.println("11");
41        break;
42      case "december":
43        System.out.println("12");
44        break;
45    }
46  }
47 }
```

5. Exercício

```
 0 import java.util.Scanner;
 1
 2 public class Exercicio-5 {
 3   public static void main(String[] args) {
 4     Scanner inp = new Scanner(System.in);
 5     System.out.print("Type your birthday [dd/mm]:");
 6     String birthday = inp.nextLine().toLowerCase();
 7     int day = Integer.parseInt(birthday.substring(0, 2));
 8     int month = Integer.parseInt(birthday.substring(3, 5));
 9     if (month % 2 == 0 && day == 31 || month == 2 && day > 29 || month >= 12 && day
>= 31) {
10       System.out.println("ERROR: Invalid Input");
11       System.exit(4);
12     }
13     System.out.print("Valid input Month: ");
14     switch (month) {
15       case 1:
16         System.out.println("january");
17         break;
18       case 2:
19         System.out.println("february");
20         break;
```

```
21      case 3:
22        System.out.println("march");
23        break;
24      case 4:
25        System.out.println("april");
26        break;
27      case 5:
28        System.out.println("may");
29        break;
30      case 6:
31        System.out.println("june");
32        break;
33      case 7:
34        System.out.println("july");
35        break;
36      case 8:
37        System.out.println("august");
38        break;
39      case 9:
40        System.out.println("september");
41        break;
42      case 10:
43        System.out.println("october");
44        break;
45      case 11:
46        System.out.println("november");
47        break;
48      case 12:
49        System.out.println("december");
50        break;
51    }
52  }
53 }
```

6. Exercício

```
0 import java.util.Scanner;
1
2 public class Exercico-6 {
3   public static void main(String[] args) {
4     Scanner inp = new Scanner(System.in);
5
6     // inputs
7     System.out.print("Type an time [hh:mm:ss]:");
8     String time1 = inp.nextLine().toLowerCase();
9     int hours1 = Integer.parseInt(time1.substring(0, 2));
```

```
10     int minutes1 = Integer.parseInt(time1.substring(3, 5));
11     int seconds1 = Integer.parseInt(time1.substring(6, 8));
12
13     System.out.print("Type an time [hh:mm:ss]:");
14     String time2 = inp.nextLine().toLowerCase();
15     int hours2 = Integer.parseInt(time2.substring(0, 2));
16     int minutes2 = Integer.parseInt(time2.substring(3, 5));
17     int seconds2 = Integer.parseInt(time2.substring(6, 8));
18
19     // Error check
20     if (hours1 > 24 || minutes1 > 60 || seconds1 > 60 || hours2 > 24 || minutes2 > 60 ||
seconds2 > 60) {
21       System.out.println("ERROR: Invalid inputs");
22       System.exit(4);
23     }
24
25     // calculate times in seconds
26     int stime1 = hours1 * 360 + minutes1 * 60 + seconds1;
27     int stime2 = hours2 * 360 + minutes2 * 60 + seconds2;
28
29     // output
30     if (stime1 > stime2) {
31       System.out.printf("Time diferences in seconds: %d\n", stime1 - stime2);
32     } else {
33       System.out.printf("Time diferences in seconds: %d\n", stime2 - stime1);
34     }
35   }
36 }
```

7. Exercício

```
 0 import java.util.Scanner;
 1
 2 public class EX7 {
 3   public static void main(String[] args) {
 4     Scanner inp = new Scanner(System.in);
 5
 6     // inputs
 7     System.out.print("Type a number:");
 8     int n = inp.nextInt();
 9     float sum = 0;
10     int odd = 0;
11     int lower = 1001;
12     int bigger = -1;
```

```
13     int i = 0;
14
15     while (i < n) {
16       System.out.print("Type a new number[0-1000]:");
17       int number = inp.nextInt();
18
19       if (n == 0) {
20         lower = number;
21         bigger = number;
22       }
23
24       // lower or bigger
25       if (number > bigger) {
26         bigger = number;
27       }
28       if (number < lower) {
29         lower = number;
30       }
31       if (number % 2 != 0) {
32         odd++;
33       }
34       sum += number;
35       i++;
36     }
37     // average
38     float average = (float) (sum / n);
39     int even = n - odd;
40     System.out.printf(" Even: %d\n Odd: %d \n Bigger: %d \n Lower: %d \n Average:
%.2f \n", even, odd, bigger, lower,
41         average);
42   }
43 }
```

8. Exercício

```
 4 import java.util.Scanner;
 3 import java.util.ArrayList;
 2 import java.util.Comparator;
 1
 0 public class Exercicio-8{
 1
 2   public static void main(String[] args) {
 3     Scanner inp = new Scanner(System.in);
 4     int count = 0;
 5     ArrayList<Integer> list = new ArrayList<Integer>();
```

```
 6     while (true) {
 7       count += 1;
 8       System.out.print("Type a number [Exit = fim]");
 9       String resp = inp.nextLine();
10
11       if (resp.equalsIgnoreCase("fim")) {
12         System.out.println("...Exit...");
13         break;
14       } else {
15         int n = Integer.parseInt(resp);
16         list.add(n);
17       }
18     }
19     list.sort(Comparator.naturalOrder());
20     list.forEach(System.out::println);
21   }
22 }
```

9. Exercício

```
 0 import java.util.Scanner;
 1
 2 public class Exercicio-9 {
 3   public static void main(String[] args) {
 4     Scanner inp = new Scanner(System.in);
 5
 6     // inputs
 7     System.out
 8         .print("Type an count like: \n [MULTIPLICA A POR B]\n [DIVIDE A POR B]\n
[SOMA A E B]\n [SUBTRAI A DE B]\n :");
 9     String[] count = inp.nextLine().toUpperCase().split(" ");
10     int A = Integer.parseInt(count[1]);
11     int B = Integer.parseInt(count[3]);
12     float C = 0;
13     switch (count[0]) {
14       case ("MULTIPLICA"):
15         C = A * B;
16         break;
17       case ("DIVIDE"):
18         C = A / B;
19         break;
20       case ("SOMA"):
```

```
 21         C = A + B;
 22         break;
 23       case ("SUBTRAI"):
 24         C = B - A;
 25         break;
 26     }
 27     System.out.printf("RESPSOTA: %.2f\n", C);
 28   }
 29 }
~
```

10. Exercício

```
  0 import java.util.Random;
  1 import java.util.Scanner;
  2
  3 public class Exercicio-10 {
  4   public static void main(String[] args) {
  5     Scanner inp = new Scanner(System.in);
  6     Random rand = new Random();
  7     int numbr = rand.nextInt(101);
  8     int tent = 0;
  9     // inputs
 10      while (true) {
 11        tent += 1;
 12        System.out.print("Adivinhe o numero: ");
 13        int n = inp.nextInt();
 14        if (n == numbr) {
 15          System.out.printf("Parabéns você conseguiu acertar\n Tentativas: %d Ultima
tentativa: %d Resposta: %d \n", tent,
 16              numbr, n);
 17          break;
 18        }
 19        if (n < numbr) {
 20          System.out.print("A resposta é maior\n");
 21        } else {
 22          System.out.print("A resposta é menor\n");
 23        }
 24      }
 25    }
 26 }
```

11. Exercício

```
 0 import java.util.ArrayList;
 1 import java.util.Random;
 2 import java.util.Scanner;
 3 import java.io.*;
 4 import java.io.File;
 5
 6  public class EX11 {
 7  public static void main(String[] args) {
 8
 9   // global variables
10    Scanner doc = null;
11    ArrayList<String[]> data = new ArrayList<String[]>();
12    File file = new File("pacientes.csv");
13    int index_older = -1, older_age = 0, n = 0;
14    int n_p = 0, womens_160_170_70 = 0, index_women_shortest = -1,
women_shortest_higth = 9999;
15    float h = 0, average = 0;
16    String[] line;
17
18    // Try to open the file
19    try {
20      doc = new Scanner(file);
21    } catch (FileNotFoundException e) {
22      System.out.printf("ERROR: File not found");
23    }
24
25    // Line loops
26    while (doc.hasNext()) {
27      // line split into words, and stored in data list
28      data.add(doc.next().split(","));
29    }
30
31    // prints de pacientes individuais
32    System.out.println("\n---------FICHA INDIVIDUAL DE PACIENTES----------");
51    for (int i = 0; i <= (data.size() - 1); i++) {
50      line = data.get(i);
49      System.out.printf("\nPACIENTE Numero %d
_____\n", i + 1);
48
47      // Somas para os calculos
46      if (line[1].equalsIgnoreCase("M")) {
45        h += 1.00;
44      } else {
43
42        // Mulher mais baixa
41        if (Integer.parseInt(line[4]) < women_shortest_higth) {
```

```
40            index_women_shortest = i;
39            women_shortest_higth = Integer.parseInt(line[4]);
38          }
37
36          // Mulher entre 1,70 e 160 com mais de 70 kg
35          if (Integer.parseInt(line[4]) < 170 && Integer.parseInt(line[4]) > 160 &&
Integer.parseInt(line[2]) > 70) {
34            womens_160_170_70++;
33          }
32        }
31        // Mais velho
30        if (Integer.parseInt(line[3]) > older_age) {
29          index_older = i;
28          older_age = Integer.parseInt(line[3]);
27        }
26        // pessoas entre 25 e 18 anos
25        if (Integer.parseInt(line[3]) >= 18 && Integer.parseInt(line[3]) <= 25) {
24          n_p++;
23        }
22
21        for (int y = 0; y <= (line.length - 1); y++) {
20          System.out.print(line[y] + "|");
19        }
18        System.out.print("\n");
17        n++;
16      }
15      // calculos do relatorio
14      average = h / n;
13      String[] older_pacient = data.get(index_older);
12      String[] women_pacient = data.get(index_women_shortest);
11      // print do relatorio geral
10      System.out.printf("\n\n----------RELATORIO GERAL----------");
 9     System.out.printf("\nNumero de pacientes: %d", n);
 8     System.out.printf("\nMedia de homens: %.2f", average);
 7     System.out.printf("\nMulheres entre 1,60m e 1,70m acima de 70kg: %d",
womens_160_170_70);
 6     System.out.printf("\nNumero de pesoas entre 18 anos e 25 anos: %d", n_p);
 5     System.out.printf("\nPaciente mais velho: " + older_pacient[0]);
 4     System.out.printf("\nMulher mais baixa: " + women_pacient[0]);
 3     System.out.printf("\n-----------------------------------------------\n");
 2
 1   }
 0 }
```