

INTRODUCTION TO COMPUTER SCIENCE

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Selection statement: switch

Exercise 1.

Write a program that asks the user to type a number and prints „zero” (if it is number 0), „one” (if it is number 1), „two” (if it is number 2), or „it is not 0, 1, 2” (if the user enters a number that is not 0, 1 or 2).

Exercise 2.

Write a program that allows user to enter a day number between 1 and 7 and then displays the corresponding day name (e.g. if user enters 2 the program should display „Tuesday”). If the user enters a number that isn't in the range of 1 to 7, it prints the message "It is not a day number!".

Exercise 3.

Write a program that converts a digit to its corresponding spelled out value; e.g. the input 7 gives the output „seven”. If the user enters a number that isn't in the range of 0 to 9, it prints the message "It is not a digit!".

Exercise 4.

Write a program that allows user to enter a month number between 1 and 12 and then displays the corresponding month name. (e.g. if user inputs 3 the program should display „March”). If the user enters a number that isn't in the range of 1 to 12, it prints the message "It is not a month number!".

Exercise 5.

Write a program that asks the user to type one number which represents the grade he got during exam. The program should display the corresponding grade name:

2 - „unsatisfactory”

3 - „satisfactory”

4 - „good”

5 - „very good”

or "It is not a grade" otherwise.

Exercise 6.

Write a program that simulates a simple calculator. The program should display on the screen the following menu:

```
Enter + to add
Enter - to subtract
Enter * to multiply
Enter / to divide
```

The program takes from the user an arithmetic operator +, -, *, / and two integers, and then performs the calculation depending on the operator entered by user.

If character entered by user doesn't match any of +, -, *, /, the program displays „You have entered an operator that does not match any of +, -, *, /”.

Exercise 7.

Following is the menu of the items available in the grocery store:

- 1 - chocolate
- 2 - milk
- 3 - bubble gum
- 4 - orange juice
- 5 - sparkling water

Write a program that asks the user to type a number corresponding to the item and then displays on the screen which item has been chosen (e.g. if user enters 4 the program should display „You have chosen orange juice!"). If the user enters a number that isn't in the range of 1 to 5, it prints the message "You have not chosen any item of the list".

Exercise 8.

Write a program that asks the user to type an integer (which represents a grade) and displays on the screen „Passing grade" (if it is 5, 4 or 3), „Failing grade" (if it is 2), or „Incorrect grade" (if user inputs any other value).

Exercise 9.

Write a program that allows the user to enter a month number between 1 and 12 and then displays how many days are in the corresponding month (e.g. if the user inputs 3 the program should display „March consists of 31 days"). Notice that if the user inputs 2 the program should display „28 days in a common year and 29 days in a leap year". If the user enters a number that isn't in the range of 1 to 12, it prints the message "The number does not represents any month of a year".

Exercise 10.

Write a program that displays the following menu:

```
Enter 1 to display the area of a rectangle
Enter 2 to display the area of a square
Enter 3 to display the area of a triangle
Enter 4 to display the area of a circle
```

and then performs the calculation depending on the number entered by the user (e.g. if the user enters 2, the program should allow the user to enter an integer which represents a side of a square and then it should display the area of the square).

If the user enters a number that isn't in the range of 1 to 4, it prints the message "Incorrect number".

Exercise 11.

Write a program that displays the following menu for the food items available to take order from the customer:

```
B - Burger
F - French Fries
P - Pizza
S - Sandwiches
```

The program enters the type of food and quantity. It finally displays the total charges for the order according to following criteria:

- 1 x Burger = 3.99 Euro
- 1 x French Fries = 1.99 Euro
- 1 x Pizza = 6.99 Euro
- 1 x Sandwiches = 2.99 Euro

If the user enters any other character than 'B', 'F', 'P', 'S', the program prints the message "You have not ordered anything".