Sukkur-Institute of Business Administration

Faculty of Computer Science

Fundamentals of Programming (Fall-2019)

LAB No. *3*

Objective of Lab No. *5*:
After performing lab5, students will be able to:

- if
- if-else
- else if
- nested if

Task No. 1:
Write a program that prompts the user to input a number. The program should then output the number and a message saying whether the number is positive, negative, or zero.

Task No. 2:
Write a program that prompts the user to input three numbers. The program should then output the numbers in ascending order.

Task No. 4:
In a right triangle, the square of the length of one side is equal to the sum of the squares of the lengths of the other two sides. Write a program that prompts the user to enter the lengths of three sides of a triangle and then outputs a message indicating whether the triangle is a right triangle.

Task No. 5:
A bank in your town updates its customers' accounts at the end of each month. The bank offers two types of accounts: savings and checking. Every customer must maintain a minimum balance. If a customer's balance falls below the minimum balance, there is a service charge of $10.00 for savings accounts and $25.00 for checking accounts. If the balance at the end of the month is at least the minimum balance, the account receives interest as follows:

(a) Savings accounts receive 4% interest.

(b) Checking accounts with balances of up to $5,000 more than the minimum balance receive 3% interest; otherwise, the interest is 5%.

Write a program that reads a customer's account number (int type), account type (char; s for savings, c for checking), minimum balance that the account should maintain, and current balance.

The program should then output the account number, account type, current balance, and an appropriate message. Test your program by running it five times, using the following data:

46728 S 1000 2700
87324 C 1500 7689
79873 S 1000 800
89832 C 2000 3000
98322 C 1000 750

Task No. 6:
Write a program that calculates and prints the bill for a cellular telephone company. The company offers two types of service: regular and premium. Its rates vary, depending on the type of service. The rates are computed as follows:

Regular service: $10.00 plus first 50 minutes are free. Charges for over 50 minutes are $0.20 per minute.

Premium service: $25.00 plus:

(a) For calls made from 6:00 a.m. to 6:00 p.m., the first 75 minutes are free; charges for more than 75 minutes are $0.10 per minute.

(b) For calls made from 6:00 p.m. to 6:00 a.m., the first 100 minutes are free; charges for more than 100 minutes are $0.05 per minute.

Your program should prompt the user to enter an account number, a service code (type char), and the number of minutes the service was used. A service code of r or R means regular service; a service code of p or P means premium service. Treat any other character as an error. Your program should output the account number, type of service, number of minutes the telephone service was used, and the amount due from the user. For the premium service, the customer may be using the service during the day and the night. Therefore, to calculate the bill, you must ask the user to input the number of minutes the service was used during the day and the number of minutes the service was used during the night.