

CSC211-Programming Fundamentals (Lab)

Fall 2021

FA21-BSE/BCS-B

Assignment # 1

Deadline: 13th October, 2021 (Till 08:00 am)

Instructions (To be followed very strictly):

- Assignment will not be considered after the mentioned deadline.
 - You are required to submit your assignment with inputs and outputs exactly as stated in the assignment description.
 - In case of cheating, all involved will get a straight “ZERO”
 - Comment your code generously.
 - All the files should be zipped into a single file before sending (note: only use *.zip/rar format)
 - Copy and paste your code from your IDE to MS word and attach screenshot of the output at the end
 - Rename your main.c and MS word document with your roll number as follows
 - Sp20-rs-005.c and sp20-rs-005.docx
 - **(Mandatory)** Upload the assignment in response to Assignment in the google classroom
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Program Name: Pay-slip Generation

Problem Statement: You have to write a program for implementing a small-scale payroll computation system. This program computes the net pay of employees of an organization based on his **grade** (Assume that employee can have four grades W, X, Y and Z), **age** and **experience** and prints the detailed pay-slip as output containing following sections.

1. Running Pay
2. Allowances
3. Deductions

At the end of allowances section, **gross pay** is shown which is computed by **summing Running pay and allowances**. Whereas, at the end of the pay-slip, **net pay** is shown which is computed by **subtracting deductions from gross pay**. Following rules are applicable for computing the amount in different sub-categories in each of the above mentioned sections.

1. Rules for computing the Running pay (RP)

The running pay (RP) is computed by following formula for each grade.

$$RP = \text{basic salary} + (\text{number of increments}) * (\text{per-increment amount})$$

The number of increments for each employee is equal to number of experience years rounded to nearest integer. The basic salary (BS) and per-increment (PI) amount are determined by grade of the employee and given in the following table for different grades.

Grade	Basic salary	Per-increment amount
W	PKR 10000/-	PKR 700/-
X	PKR 12900/-	PKR 910/-
Y	PKR 21700/-	PKR 1500/-
Z	PKR 32600/-	PKR 2800/-

2. Rules for computing the allowances

Following types of allowances are computed in this section.

a. House rent allowance (HRA)

HRA is computed as 45% of running pay (RP).

b. Social Security Benefit (SSB)

SSB is computed as 30% of basic salary (BS).

c. Ad-hoc relief allowance (ARA)

A fixed amount of PKR 3000/- is given to employees with grade 'W' having more than 3 years of experience, but not younger than 30 years. In case of other grades, a fixed amount of PKR 1500/- is given to employees older than 40 years.

d. Gross pay (GP) is computed by summing up RP and all the allowances.

3. Rules for computing the deductions

Following types of deductions are made from the pay.

a. Income Tax (IT)

IT is deducted using following rules for annual income. The annual income is computed by multiplying the gross pay (GP) with 12.

Lower limit	Upper limit	IT rate (% of gross pay)
PKR 0/-	PKR 400,000/-	0
PKR 400,001/-	PKR 650,000/-	2.5
PKR 650,001/-	PKR 1,000,000/-	4.75
PKR 1,000,001/-	PKR 1,500,000/-	7
PKR 1,500,001/-	∞	11.5

b. General Provident Fund (GPF) = 10% of Gross pay

Distribution of marks is as follows: Total Marks (25)

- Correct computation of running pay -
 - (5 marks) Determine basic salary of employee
 - (3 marks) Compute running pay
- Correct computation of gross pay —
 - (3 marks) Compute HRA, SSB and ARA
 - (4 marks) Compute gross pay

- Correct computation of deductions _
 - (5 marks) Compute Income Tax
- Displaying the pay-slip in given format (see output)
 - (2 marks) Input the values from user
 - (3 marks) Proper spacing/formatting of pay-slip

Expected output: Following is the screenshot of the sample output of your program.

Screenshot 1:

```

"C:\Users\phd\Dropbox\Job Related\FCP\Labs\Payslip.exe"
Enter your grade, age and years of experience: Z 35 4
Basic Pay
-----
Basic Salary:                32600
Number of increments:        4
Running pay:                 43800
Allowances
-----
House Rent Allowance:        19710
Social Security Benefit:     9780
Adhoc Relief Allowance:      3000
Gross pay:                   76200
Deductions
-----
Income Tax (at 4.75%):       1543
General Provident Fund:      7629
Total Deductions:            9172
NET PAY:                      67028

Process returned 59 (0x3B)   execution time : 8.587 s
Press any key to continue.

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