Q1. Write a program to input two numbers and display the highest number.

#include <stdio.h>

int main() {

    int num1, num2;

    printf("Enter the first number: ");

    scanf("%d", &num1);

    printf("Enter the second number: ");

    scanf("%d", &num2);

    if (num1 > num2) {

        printf("The highest number is: %d\n", num1);

    } else if (num2 > num1) {

        printf("The highest number is: %d\n", num2);

    } else {

        printf("Both numbers are equal.\n");

    }

    return 0;

}

Q2. Write a complete program to ask user enter three integer numbers, and then tell the user the largest value and smallest value among the three numbers.

#include <stdio.h>

int main() {

    int num1, num2, num3;

    int largest, smallest;

    printf("Enter the first number: ");

    scanf("%d", &num1);

    printf("Enter the second number: ");

    scanf("%d", &num2);

    printf("Enter the third number: ");

    scanf("%d", &num3);

    largest = smallest = num1;

    if (num2 > largest)

        largest = num2;

    else if (num2 < smallest)

        smallest = num2;

    if (num3 > largest)

        largest = num3;

    else if (num3 < smallest)

        smallest = num3;

    printf("The largest number is: %d\n", largest);

    printf("The smallest number is: %d\n", smallest);

    return 0;

}

Q3. Display employee name, new salary, when the user inputs employee name, and basic salary. You can refer following formula and the table to calculate new salary:

New Salary = Basic Salary + Increment

Basic Salary Increment

Less than 5000 5% of Basic Salary

More than or equal 5000

And less than 10000 10% of Basic Salary

More than or equal 10,000 15% of Basic Salary

#include <stdio.h>

int main() {

    char employeeName[50];

    float basicSalary, newSalary, increment;

    printf("Enter employee name: ");

    scanf("%s", &employeeName);

    printf("Enter basic salary: ");

    scanf("%f", &basicSalary)

    if (basicSalary < 5000)

        increment = basicSalary \* 0.05;

     else if (basicSalary >= 5000)

        increment = basicSalary \* 0.1;

     else if (basicSalary < 10000)

        increment = basicSalary \* 0.1;

     else

        increment = basicSalary \* 0.15;

    newSalary = basicSalary + increment;

    printf("Employee Name: %s\n", employeeName);

    printf("New Salary: %.2f\n", newSalary);

    return 0;

}

Q4. Diameter, Circumference and Area of a Circle) Write a program that reads in the radius of a circle and prints the circle’s diameter, circumference and area. Use the constant value 3.14159 for π. Perform each of these calculations inside the printf statement(s) and use the conversion specifier %f.

#include <stdio.h>

int main() {

    float radius;

    const float PI = 3.14159;

    printf("Enter the radius of the circle: ");

    scanf("%f", &radius);

    printf("Diameter: %f\n", 2 \* radius);

    printf("Circumference: %f\n", 2 \* PI \* radius);

    printf("Area: %f\n", PI \* radius \* radius);

    return 0;

}

Q5.Write a program that reads in two integers and determines and prints if the first is a multiple of the second.

#include <stdio.h>

int main() {

    int num1, num2;

    printf("Enter the first number: ");

    scanf("%d", &num1);

    printf("Enter the second number: ");

    scanf("%d", &num2);

    if (num1 % num2 == 0) {

        printf("%d is a multiple of %d\n", num1, num2);

    } else {

        printf("%d is not a multiple of %d\n", num1, num2);

    }

    return 0;

}

Q6. Write a C program that prints the integer equivalents of some uppercase letters, lowercase letters, digits and special symbols. As a minimum, determine the integer equivalents of the following: A B C a b c 0 1 2 $ \* + / and the blank character.

#include <stdio.h>

int main() {

    char ch;

    printf("ASCII values of uppercase letters:\n");

    for (ch = 'A'; ch <= 'Z'; ch++) {

        printf("%c: %d\n", ch, ch);

    }

    printf("\nASCII values of lowercase letters:\n");

    for (ch = 'a'; ch <= 'z'; ch++) {

        printf("%c: %d\n", ch, ch);

    }

    printf("\nASCII values of digits:\n");

    for (ch = '0'; ch <= '9'; ch++) {

        printf("%c: %d\n", ch, ch);

    }

    printf("\nASCII values of special symbols:\n");

    printf("$: %d\n", '$');

    printf("\*: %d\n", '\*');

    printf("+: %d\n", '+');

    printf("/: %d\n", '/');

    printf("Blank Character: %d\n", ' ');

}

Q7. The gross remuneration of a company salesman comprises the Basic Salary and certain additional allowances and bonuses as given below: Salesmen with over 5 years’ service receive a 10% additional allowance of Basic Salary each month. Salesmen working in Colombo ( Input character ‘C’ if the city is Colombo) receive an additional allowance of Rs. 2,500/- per month. The monthly bonus payment is computed as given below:

|  |  |
| --- | --- |
| Monthly Sales(Rs) | Bonus as a percentage of monthly sales |
| 0-25000  25000-50000  >=50000 | 10  12  15 |

Write a program to output the gross monthly remuneration of a salesman.

#include <stdio.h>

int main() {

    float basicSalary;

    int yearsOfService;

    char city;

    float additionalAllowance = 0,bonus = 0,grossRemuneration;

    printf("Enter the basic salary: ");

    scanf("%f", &basicSalary);

    printf("Enter the number of years of service: ");

    scanf("%d", &yearsOfService);

    printf("Enter the city: ");

    scanf(" %c", &city);

    if (yearsOfService > 5)

        additionalAllowance += 0.10 \* basicSalary;

    if (city == 'C')

        additionalAllowance += 2500;

    if (basicSalary >= 50000)

        bonus += 0.15 \* basicSalary;

     else if (basicSalary >= 25000)

        bonus += 0.12 \* basicSalary;

     else

        bonus += 0.10 \* basicSalary;

    grossRemuneration = basicSalary + additionalAllowance + bonus;

printf("Gross Monthly Remuneration: %.2f\n", grossRemuneration);

}