Akash

CCA-101: Fundamentals of IT & Programming

"Do it yourself" Assignment with Solutions

Q. No. 1: Write a program in C to display your name and address on computer screen.

Q. No. 2: Write a program in C to add two integer numbers

Q.No. 3: Write a program in C to compute the value of x in this expression x= 20/(8-4)*8-2

Q.No. 4: Write a program in C to compute a quotient and remainder

Q.No. 5: Write a program in C to swap the value of two integer numbers

Q. No. 6: Write a program to find the Largest of three numbers

Q. No. 7: Write a Program to check whether a integer number is even or odd.

Q.No. 8 Write a program to display table of any integer number.

Q. No. 9 Write a program to display first ten terms of the Fibonacci sequence.

Q. No. 10 Write a program to calculate the sum of digits of an integer number.

Q. No.11 Write a program to reverse an integer number.

Q. No.12 Write a program to calculate factors of a positive integer.

13-11-2024

Q1 Write a Program in C to display your name and address on computer screen.

C Program to read and Print your name and Address.

```
#include <stdio.h>  #include <string.h> int main()
{
Char name [20], address [80];
Printf ("Enter your name: ");
gets (name);
Printf ("Enter your address: ");
gets (address);
Print f ("==========\n");
Print f ("your name: %s \n", name);
Print F ("Your address: %s \n", address);
Print f ("==========\n");
```

Ques02 Write a Program in C to add two integer number.

certainly! Here's a simple C Program that adds two integers:

C

```
#include <stdio.h>
int main () {
    int num1, num2, sum;
// Ask the user for two intergers
Printf ("Enter the first integer: ");
Scan F ("%d", & num1);
```

```
Print F ("Enter the second integer: ");
  Scan F ("%d", &num2);
    // Add the number
    Sum = num1 + num2;
    // Display the result
  Print F ("The sum of %d and %d \n", num1, num2,
                                        Sum);
  return 0;
}
```

Ques 03 White a Program in C to computer the Value of x in this expression $x = 20/(8-4)* 8-2$

To compute the value of (x) in the expression ($x = \frac{200}{(8-4)} \times 8-2$) using C, order of operations (Parentheses, multiplication and division from left to Right, and then addition and subtraction) Be can implement this in a Simple C Program:

```
C
1 # include <stdio.h>
2
3 int main () {
4         // Beclare the variable to hold the result.
5           result double x;
6
7     // Calculate the value of x using the
          given expression
8     x = 200.0 / (8-4) * 8-2;
9
```

```
    // Print the result
    Print f (" The value of x is ; %.2f\n", x);

    return 0;
}
```

Qu 04 Write a Program in C to Compute a quotient and remainder.

C Program that computer the quotient and remainder

C

```
#include <stdio.h>
int main() {
    int dividend, divisor, quotient, remainder;

    // Input the dividend and divisor
    PrintF ("Enter the dividend: ");
    Scanf ("%d", &dividend);

    Print F ("Enter the divisor: ");
    scanf ("%d", &divisor);

    // Check if divisor is zero to avaid division by
    zero error if (divisor == 0) {

        Print ("Error! Division by zero is not
                allowed.\n");

    } else {
```

```
// compute quotient and remainder
quotient = dividend / divisor;
remainder = dividend % divisor;

// output the results
Print F ("Quotient: %d\n", quotient);
Print f ("Remainder: %d\n", remainder);
}

return 0;
```

Ques 05 - Write a Program in C to swap the value of two integer numbers

C Program to swap the values of two integer numbers using a temporary variable:

C

```
#include <Stdio.h>
int main () {
    int a, b, temp;
// Input the values of a and b
Print f ("Enter the value of a: ");
scan f ("%d", &a);
Print ("Enter the value of b: ");
Scan ("%d", &b);
// Display the values before swapping
Print f ("\n Before swapping: \n");
Print f ("a = %d, b = %d \n", a, b);
```

```
// swapping using a temporary variable
temp = a;
a = b;
b = temp;

// Display the values after swapping
Printf("\nAfter swapping:\n");
Printf("a = %d, b = %d\n", a, b);

return 0;
}
```

Ques 06- Write a Program to find the largest of three numbers

Python Program to find the largest of three numbers

Python

```
# function to find the largest of three numbers
def find_largest(a, b, c):
    if a >= b and a >= c:
        return a
    elif b >= a and b >= c:
        return b
    else:
        return c

# Taking input from the user
num1 = float(input("Enter the first number: "))
num2 = float(input("Enter the second number: "))
num3 = float(input("Enter the third number: "))
```

Calling the function and displaying the result

```
largest = find_largest (num , num2, num3)
Print ("The largest number is:", largest)
```

Ques 07 - Write a Program to Check whether a integer number is even or odd.

Python that checks whether an integer number is even or odd:

Python

```
1 def Check_even_odd (number):
2     if number % 2 = 0:
3         return "Even"
4     else:
5         return "Odd"
6
7     # Input from the user
8 try:
9     user_input = int (input ("Enter and integer number:"))
10    result = Check_even_odd (user_input)
11    Print (f"The number {user_input is {result}.")
12 except ValueError:
13    Print ("Please enter a valid integer.")
```

08- Write a Program to display table of any integer number.

Python Program that display the multiplication table for any integer number provided by the user

Python

```
def display_multiplication_table(number, limit = 10):
print(f"multiplication Table for {number}:")
for i in range(1, limit + 1):
print(f"{number} x {i} = {number * i}")

# Input from the user
try:
user_input = int(input("Enter an integer number:"))
display_multiplication_table(user_Input)
except ValueError:
Print("Please enter a valid integer.")
```

ques 09- Write a Program to display first ~~ten~~ ten terms of the fibonacci sequence

C Program that computer the quotient and remainder when dividing two number:

C

```
#include <stdio.h>
```

03- Write a Program to display first ten terms of the fibonacci sequence.

C

```
#include <stdio.h>
int main () {
    int i, n = 10;
    long long fib1 = 0, fib2 = 1, nextTerm;
Printf ("The first 10 terms of the fibonacci sequence
                                    are:\n");

// Print the first two terms of the fibonacci sequence
   Print ("%-11d", fib1, fib2);

// Loop to generate the next terms
   for (i=3; i<=n; i++) {
      nextTerm = fib1 + fib2; // Calculate the next term
      Print ("%-11d", nextTerm);
   // for formatting Print a comma after each term
      except the last one
       if (i<n) {
           Print (", ");
   }
       // update the Previos two terms
        fib1 = fib2
        fib2 = nextTerm;
   }
     Print ("\n");
   }    return 0;
```

10 Write a Program to Calculate the sum of digits to an integer number.

Python Program that Calculates the sum of the digits of an integer number. you can run this code in any Python environment

Python

```
1 - def sum_of_digits(number):
2 -     # Convert the number to a string to iterate
        over each digits
3 -     # Use abs() to handle negative number
4 -     return sum(int(digit) for digit in str(abs(number)))
5 -
6 - # Input from the user
7 - try:
8 - user_input = int(input("Enter an integer number:"))
9 - result = sum_of_digits(user_input)
10 - Print(f"The sum of the digits of {user_input} is:
                                        {result}.")
11 - except Value Error:
12 Print("Please enter a valid integer.")
```

Qs-11 Write a Program to reverse an integer number.

Python Program to reverse an integer number.

Python

```
def reverse_integer(n):
    # Handle negative number
    sign = -1 if n < 0 else 1
    n = abs(n)

    reversed_number = 0
    while n != 0:
        digit = n % 10
        reversed_number = reversed_number * 10 + digit
        n //= 10
    # Apply the sign of the original number
    return sign * reversed_number

# Test the function
num = int(input("Enter an integer: "))
reversed_num = reverse_integer(num)
Print("Reversed integer:", reversed_num)
```

12- Write a Program to Calculate factors of a Positive integer

Python Program to Calculate the factors of a Positive integer.

Python

```
def find_factory (n):
    factory
    factors = [ ]
    for i in range (1, n + 1):
        if n % i == 0:
            factors. append (i)

return factors

# Test the function
num = int (input ("Enter a Positive integer: "))
if num > 0:
    factors = find_factors (num)
    Print (f" factors of {num}: {factors}")

else:
    Print ("Please enter a Positive integer."))
```