DAY 16

1.Write a program to print the multiplication table of any number

#include <stdio.h>

int main() {

int n;

printf("Enter a number: ");

scanf("%d", &n);

for (int i = 1; i <= 10; i++) {

printf("%d x %d = %d\n", n, i, n \* i);

}

return 0;

}

2. Write a program to calculate the sum of digits using a loop.

#include <stdio.h>

int main() {

int n, sum = 0;

printf("Enter a number: ");

scanf("%d", &n);

while (n != 0) {

sum += n % 10;

n /= 10;

}

printf("Sum of digits = %d\n", sum);

return 0;

}

3. Write a program to count digits using a loop.

#include <stdio.h>

int main() {

int n, count = 0;

printf("Enter a number: ");

scanf("%d", &n);

if (n == 0) count = 1;

while (n != 0) {

count++;

n /= 10;

}

printf("Total digits = %d\n", count);

return 0;

}

4. Write a program to reverse a number using a loop.

#include <stdio.h>

int main() {

int n, rev = 0;

printf("Enter a number: ");

scanf("%d", &n);

while (n != 0) {

rev = rev \* 10 + n % 10;

n /= 10;

}

printf("Reversed number = %d\n", rev);

return 0;

}

5. Write a program to print the factorial using a loop.

#include <stdio.h>

int main() {

int n;

unsigned long long fact = 1;

printf("Enter a number: ");

scanf("%d", &n);

for (int i = 1; i <= n; i++) {

fact \*= i;

}

printf("Factorial = %llu\n", fact);

return 0;

}

6. Write a program to print numbers from 1 to 100 skipping multiples of 3.

#include <stdio.h>

int main() {

for (int i = 1; i <= 100; i++) {

if (i % 3 == 0) continue;

printf("%d ", i);

}

return 0;

}

7. Write a program to print all Armstrong numbers between 1 and 1000.

#include <stdio.h>

#include <math.h>

int main() {

int num, temp, rem, sum, digits;

printf("Armstrong numbers between 1 and 1000:\n");

for (num = 1; num <= 1000; num++) {

temp = num;

digits = 0;

while (temp != 0) {

digits++;

temp /= 10;

}

temp = num;

sum = 0;

while (temp != 0) {

rem = temp % 10;

sum += pow(rem, digits);

temp /= 10;

}

if (sum == num)

printf("%d ", num);

}

return 0;

}

8. Write a program to find the HCF using loop logic.

#include <stdio.h>

int main() {

int a, b, hcf;

printf("Enter two numbers: ");

scanf("%d %d", &a, &b);

for (int i = 1; i <= a && i <= b; i++) {

if (a % i == 0 && b % i == 0)

hcf = i;

}

printf("HCF = %d\n", hcf);

return 0;

}

9. Write a program to compute the sum of series 1 + 1/2 + 1/3 + … + 1/n.

#include <stdio.h>

int main() {

int n;

float sum = 0.0;

printf("Enter the value of n: ");

scanf("%d", &n);

for (int i = 1; i <= n; i++) {

sum += 1.0 / i;

}

printf("Sum of series = %.2f\n", sum);

return 0;

}

10. Write a program to check whether a number is a palindrome using loop only.

#include <stdio.h>

int main() {

int n, rev = 0, temp;

printf("Enter a number: ");

scanf("%d", &n);

temp = n;

while (n != 0) {

rev = rev \* 10 + n % 10;

n /= 10;

}

if (rev == temp)

printf("Palindrome\n");

else

printf("Not Palindrome\n");

return 0;

}