**MODULE 1 - ASSIGNMENT QUESTIONS**

1. **Write a C program to determine the given number is odd or even using Bitwise operators.**

#include <stdio.h>

int main()

{

int n;

scanf("%d", &n);

if(n&1)

printf("The number is odd");

else

printf("The number is even");

return 0;

}

1. **Write a C program to count the number of bits set in a number.**

#include<stdio.h>

int main()

{

int n;

scanf("%d", &n);

int count=0;

while(n!=0)

{

if(n%2==1)

count++;

n=n/2;

}

printf("Count of Set bits: %d", count);

return 0;

}

1. **Write a C program to swap two numbers. Use a function pointer to do this operation.**

void swap(int \*a, int \*b) {

int temp = \*a;

\*a = \*b;

\*b = temp;

}

int main() {

int a,b;

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

void (\*ptr)(int \*, int \*)=swap;

ptr(&a, &b);

printf("%d %d", a, b);

return 0;

}

1. **Write an equivalent pointer expression for fetching the value of array element a[i][j][k][2]**

\*(\*(\*(\*(a + i) + j) + k) + 2)

1. **Write a C program to Multiply two matrix (n\*n) using pointers.**

#include <stdio.h>

float multiply (float a,float b)

{

return a\*b;

}

int main()

{

float m1[3][3],m2[3][3];

for(int i=0;i<3;i++)

for(int j=0;j<3;j++)

scanf("%f",&m1[i][j]);

for(int i=0;i<3;i++)

for(int j=0;j<3;j++)

scanf("%f",&m2[i][j]);

float (\*ip)(float, float);

ip=multiply;

for(int i=0;i<3;i++)

{

for(int j=0;j<3;j++)

{

printf("%f ",ip(m1[i][j],m2[i][j]));

}

printf("\n");

}

return 0;

}

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**Answer for the above question**: 8

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**Answer for the above question**: 24

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**Answer for the above question**: 87654321