Q.1 Matrix multiplication

main.c

Share Run

```c
#include <stdio.h>
int main(){
    int a[2][2] = {{1,2},{3,4}};
    int b[2][2] = {{5,6},{7,8}};
    int c[2][2],i,j,k;
    for(i=0;i<2;i++){
        for(j=0;j<2;j++){
            c[i][j] =0;
        for(k=0;k<2;k++){
           c[i][j] += a[i][k]*b[k][j];
        }
        }
    }
    printf("Matrix Multiplication \n");
    for(i=0;i<2;i++){
        for(j=0;j<2;j++){
            printf("%d ",c[i][j]);
        }
        printf("\n");
    }
    return 0;
}
```

Output

```
Matrix Multiplication
19 22
43 50


=== Code Execution Successful ===
```

==========

Q.2 Even or Odd number

main.c

Share Run

```c
#include<stdio.h>
int main(){
    int a[]={2,4,7,6,38,9,11,14};
    int n=sizeof(a)/sizeof(a[0]);
    for(int i=0;i<n;i++){
        if(a[i]%2==0){
            printf("%d is even number.\n",a[i]);
        } else{
            printf("%d is odd number.\n",a[i]);
        }
    }
    return 0;
}
```

Output

```
2 is even number.
4 is even number.
7 is odd number.
6 is even number.
38 is even number.
9 is odd number.
11 is odd number.
14 is even number.


=== Code Execution Successful ===
```

==========

Q.3 Factorial without using recursion

main.c — Share — Run — Output

```c
#include<stdio.h>
int main(){
    int a;
    printf("Enter a number :");
    scanf("%d",&a);
    int product =1 ;
    for(int i=1;i<=a;i++){
        product*=i;
    }
    printf("%d is factorial of %d",product,a);
    return 0;
}
```

```
Enter a number :5
120 is factorial of 5

=== Code Execution Successful ===
```

==========

Q.4 Fibonacci series without using Recursion

main.c — Share — Run — Output

```c
#include<stdio.h>
int main(){
    int n;
    printf("Enter a number :");
    scanf("%d",&n);
    int a=0,b=1,result;
    for(int i=1;i<=n;i++){
        if(i<=1){
            result=a+b;
        } else{
            result =a+b;
            a=b;
            b=result;
        }
        printf("%d  ",result);
    }
    return 0;
}
```

```
Enter a number :5
1  1  2  3  5

=== Code Execution Successful ===
```

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Q.5 Factorial of a given number using Recursion

main.c

Share Run

```c
#include<stdio.h>
int factorial(int n){
    if(n==1 || n==0){
        return 1;
    }
    else{
        return n*factorial(n-1);
    }
}
int main(){
    int n;
    printf("Enter a number :");
    scanf("%d",&n);
    printf("Factorial of %d = %d",n,factorial(n));
    return 0;
}
```

Output

```
Enter a number :5
Factorial of 5 = 120

=== Code Execution Successful ===
```

==========

Q.6 Fibonacci series using Recursion

main.c

Share Run

```c
#include<stdio.h>
int fib(int i){
    if(i<=1)
    return i;
    else
    return fib(i-1) +fib(i-2);
}
int main(){
    int n ;
    printf("Enter a number: ");
    scanf("%d",&n);
    for(int i=0;i<n;i++){
        printf("%d ",fib(i));
    }
    return 0;
}
```

Output

```
Enter a number: 5
0 1 1 2 3

=== Code Execution Successful ===
```

==========

Q.7 Implement Array operations such as Insert, Delete and Display