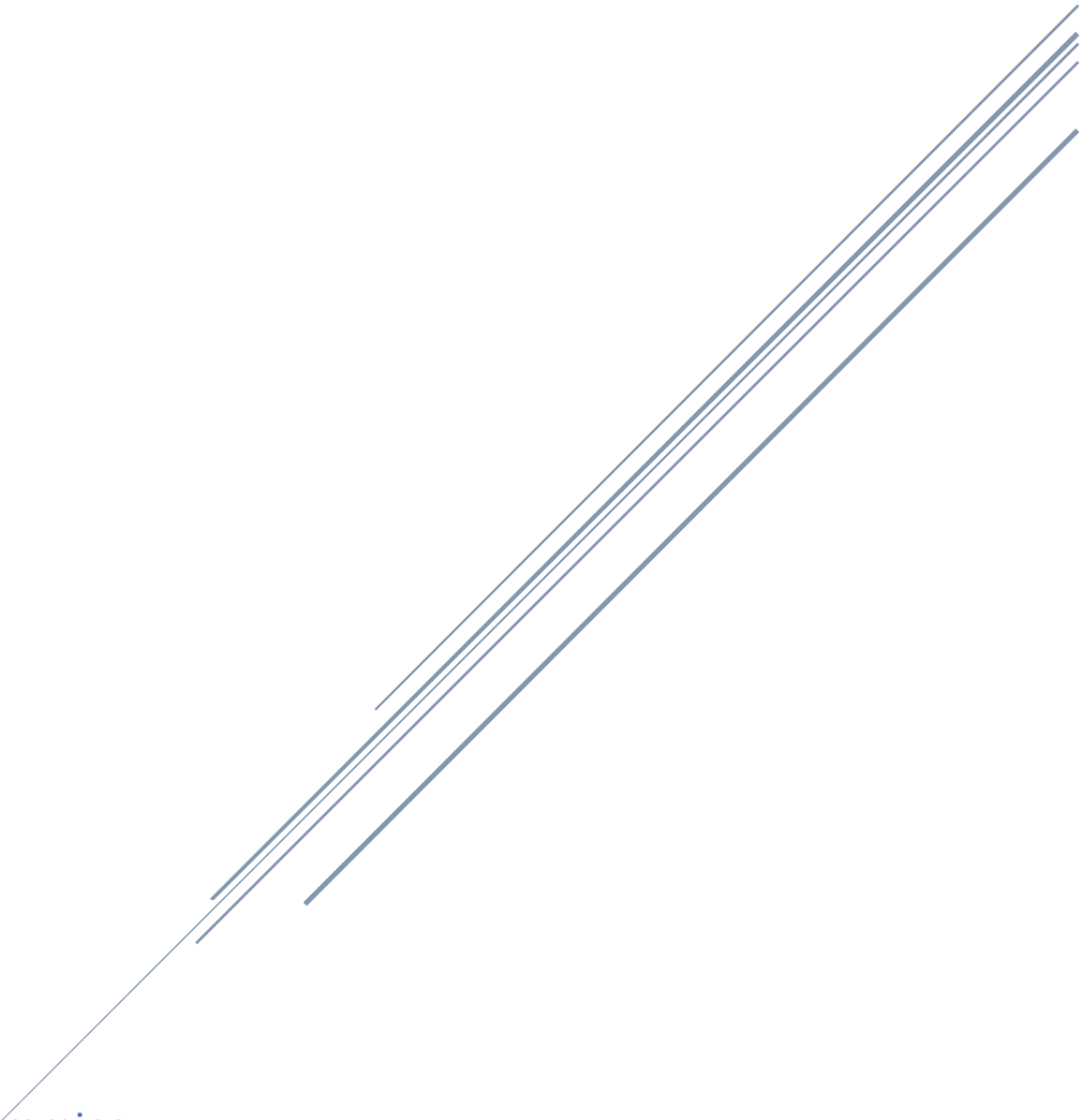
ASSIGNMENT 2

Lecture 3



C-Programming

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EX1: Write C Program to Check Whether a Number is Even or Odd

```c
#include <stdio.h>

int main() {
    int num;
    printf("Enter a number: ");
    scanf("%d", &num);

    if (num % 2 == 0)
        printf("%d is even.\n", num);
     else
        printf("%d is odd.\n", num);


    return 0;
}
```

EX2: C Program to Check Vowel or Consonant

```c
#include <stdio.h>

int main() {
    char character;
    printf("Enter a character: ");
    scanf(" %c", &character);
    switch (character) {
        case 'a':
        case 'e':
        case 'i':
        case 'o':
        case 'u':
        case 'A':
        case 'E':
        case 'I':
        case 'O':
        case 'U':
            printf("%c is a vowel.\n", character);
            break;
        default:
            printf("%c is a consonant.\n", character);
            break;
    }

    return 0;
}
```

EX3:C Program to Find the Largest Number Among Three Numbers

```c
#include <stdio.h>

int main() {
    int num1, num2, num3;
    printf("Enter three numbers: ");
    scanf("%d %d %d", &num1, &num2, &num3);

    if (num1 >= num2 && num1 >= num3)
        printf("The largest number is: %d\n", num1);
     else if (num2 >= num1 && num2 >= num3)
        printf("The largest number is: %d\n", num2);
     else
        printf("The largest number is: %d\n", num3);

    return 0;
}
```

EX4: C Program to Check Whether a Number is Positive or Negative

```c
#include <stdio.h>

int main() {
    int num;
    printf("Enter a number: ");
    scanf("%d", &num);

    if (num > 0)
        printf("%d is positive.\n", num);
     else if (num < 0)
        printf("%d is negative.\n", num);
     else
        printf("The number is zero.\n");

    return 0;
}
```

EX5: C Program to Check Whether a Character is an Alphabet or not

```c
#include <stdio.h>

int main() {
    char character;
    printf("Enter a character: ");
    scanf(" %c", &character);
    if ((character >= 'a' && character <= 'z') || (character >= 'A' && character <= 'Z'))
        printf("%c is an alphabetical character.\n", character);
     else
        printf("%c is not an alphabetical character.\n", character);

    return 0;
}
```

EX6: C Program to Calculate Sum of Natural Numbers

```c
#include <stdio.h>

int main() {
    int n, sum = 0;
    printf("Enter an integer: ");
    scanf("%d", &n);

    for (int i = 1; i <= n; ++i) {
        sum += i;}
    printf("The sum of natural numbers up to %d is: %d\n", n, sum);

    return 0;
}
```

EX7: C Program to Find Factorial of a Number

```c
#include <stdio.h>

int main() {
    int n;
    unsigned long long factorial = 1;

    printf("Enter a non-negative integer: ");
    scanf("%d", &n);

    if (n < 0) {
        printf("Factorial of a negative number doesn't exist .\n");
        return 1;
    }

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

    printf("The factorial of %d is: %lld\n", n, factorial);

    return 0;
}
```

EX8: C Program to Make a Simple Calculator to Add, Subtract, Multiply or Divide Using switch...case

```c
#include <stdio.h>
int main() {
    char operator;
    double num1, num2, result;
    printf("Enter an operator (+, -, *, /): ");
    scanf(" %c", &operator);
    printf("Enter two numbers: ");
    scanf("%lf %lf", &num1, &num2);
    switch (operator) {
        case '+':
            result = num1 + num2;
            printf("Result: %.2lf\n", result);
            break;
        case '-':
            result = num1 - num2;
            printf("Result: %.2lf\n", result);
            break;
        case '*':
            result = num1 * num2;
            printf("Result: %.2lf\n", result);
            break;
        case '/':
            if (num2 != 0) {
                result = num1 / num2;
                printf("Result: %.2lf\n", result);
            } else
                printf("Error: Division by zero is not allowed.\n");
            break;
        default:
            printf("Error: Invalid operator.\n");
            break;
    }
    return 0;
```