Prepared By: Angel Mainali (Computer Teacher at Liberty School)

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Basic Arithmetic Calculations

1. Simple Interest Calculation

```
#include <stdio.h>

int main() {
   float p, t, r, si;

   printf("Enter Principal, Time and Rate: ");
   scanf("%f%f%f", &p, &t, &r);

   si = (p * t * r) / 100;

   printf("Simple Interest is %f", si);

   return 0;
}
```

2. Area and Perimeter of Rectangle

```
#include <stdio.h>

int main() {
   float l, b, area, peri;

   printf("Enter length and breadth: ");
   scanf("%f%f", &l, &b);

   area = l * b;
   peri = 2 * (l + b);

   printf("Area is %f ", area);
   printf("Perimeter is %f", peri);

   return 0;
}
```

3. Sum and Product of Two Numbers

```
#include <stdio.h>

int main() {
   int a, b, sum, product;

   printf("Enter two numbers: ");
   scanf("%d%d", &a, &b);

   sum = a + b;
   product = a * b;

   printf("Sum is %d", sum);
   printf("Product is %d", product);

   return 0;
}
```

Basic Input and Condition Checks

4. Check Whether Number is Positive, Negative, or Zero

```
#include <stdio.h>

int main() {
    int num;

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

    if (num > 0) {
        printf("Positive number");
    } else if (num < 0) {
        printf("Negative number");
    } else {
        printf("Zero");
    }

    return 0;
}
```

5. Check Whether Number is Odd, Even, or Zero

```
#include <stdio.h>

int main() {
    int num;

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

    if (num == 0) {
        printf("Zero");
    } else if (num % 2 == 0) {
        printf("Even number");
    } else {
        printf("Odd number");
    }

    return 0;
}
```

6. Check Whether Number is Divisible by 7

```
#include <stdio.h>

int main() {
    int num;

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

    if (num % 7 == 0) {
        printf("Divisible by 7");
    } else {
        printf("Not divisible by 7");
```

```
    }

    return 0;
}
```

7. Find Greatest Among Two Numbers

```
#include <stdio.h>

int main() {
    int a, b;

    printf("Enter two numbers: ");
    scanf("%d%d", &a, &b);

    if (a > b) {
        printf("a is greater");
    } else if (b > a) {
        printf("b is greater");
    } else {
        printf("Both numbers are equal");
    }

    return 0;
}
```

8. Find Smallest Among Two Numbers

```
#include <stdio.h>

int main() {
    int a, b;

    printf("Enter two numbers: ");
    scanf("%d %d", &a, &b);

    if (a < b) {
        printf("a is smallest");
    } else if (b < a) {
        printf("b is smallest");
    } else {
        printf("Both numbers are equal");
    }

    return 0;
}
```

9. Find Greatest Among Three Numbers

```
#include <stdio.h>

int main() {
    int a, b, c;

    printf("Enter three numbers: ");
    scanf("%d %d %d", &a, &b, &c);
```

```
    if (a == b && b == c) {
        printf("All numbers are equal");
    } else if (a >= b && a >= c) {
        printf("First number is greatest");
    } else if (b >= a && b >= c) {
        printf("Second number is greatest");
    } else {
        printf("Third number is greatest");
    }

    return 0;
}
```

10. Find Smallest Among Three Numbers

```
#include <stdio.h>

int main() {
    int a, b, c;

    printf("Enter three numbers: ");
    scanf("%d %d %d", &a, &b, &c);

    if (a == b && b == c) {
        printf("All numbers are equal");
    } else if (a <= b && a <= c) {
        printf("First number is smallest");
    } else if (b <= a && b <= c) {
        printf("Second number is smallest");
    } else {
        printf("Third number is smallest");
    }

    return 0;
}
```

11. Take a computer marks and check Pass or Fail (Pass Mark 40)

```
#include <stdio.h>

int main() {
    int marks;

    printf("Enter computer marks: ");
    scanf("%d", &marks);

    if (marks >= 40) {
        printf("Pass");
    } else {
        printf("Fail");
    }

    return 0;
}
```

Loop Programs

12. Display First 10 Natural Numbers OR WAP to print series 1,2,3,4,5,6,…,upto 10 term.

```
#include <stdio.h>

int main() {
   int i;

   for (i = 1; i <= 10; i++) {
      printf("%d ", i);
   }

   return 0;
}
```

13. Display First n Natural Numbers OR WAP to print series 1,2,3,4,5,6,…,upto n term.

```
#include <stdio.h>

int main() {
   int n, i;

   printf("Enter value of n: ");
   scanf("%d", &n);

   for (i = 1; i <= n; i++) {
      printf("%d ", i);
   }

   return 0;
}
```

14. Display Series: 5, 10, 15, ..., 50

```
#include <stdio.h>

int main() {
   int i;

   for (i = 5; i <= 50; i += 5) {
      printf("%d ", i);
   }

   return 0;
}
```

15. Display Series: 3, 6, 9, ..., 30

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

```
int main() {
   int i;

   for (i = 3; i <= 30; i += 3) {
      printf("%d ", i);
   }

   return 0;
}
```

16. Display Series: 3, 6, 9, ... up to n Terms

```
#include <stdio.h>

int main() {
   int n, i;

   printf("Enter value of n: ");
   scanf("%d", &n);

   for (i = 3; i <= n; i += 3) {
      printf("%d ", i);
   }

   return 0;
}
```

17. Display First 10 Natural Numbers and their Sum

```
#include <stdio.h>

int main() {
   int i, sum = 0;

   for (i = 1; i <= 10; i++) {
      printf("%d ", i);
      sum = sum + i;
   }

   printf("Sum is %d", sum);

   return 0;
}
```

18. Display First n Natural Numbers and their Sum

```
#include <stdio.h>

int main() {
   int n, i, sum = 0;

   printf("Enter value of n: ");
   scanf("%d", &n);

   for (i = 1; i <= n; i++) {
      printf("%d ", i);
      sum =sum+ i;
```

```
    }

    printf("Sum is %d", sum);

    return 0;
}
```

19. Sum of First n Natural Numbers

```
#include <stdio.h>

int main() {
    int n, i, sum = 0;

    printf("Enter value of n: ");
    scanf("%d", &n);

    for (i = 1; i <= n; i++) {
        sum= sum + i;
    }

    printf("Sum is %d", sum);

    return 0;
}
```

20. Display Odd Numbers from 80 to 90

```
#include <stdio.h>

int main() {
    int i;

    for (i = 80; i <= 90; i++) {
        if (i % 2 != 0) {
            printf("%d ", i);
        }
    }

    return 0;
}
```

21. Display Even Numbers from 50 to 60

```
#include <stdio.h>

int main() {
    int i;

    for (i = 50; i <= 60; i++) {
        if (i % 2 == 0) {
            printf("%d ", i);
        }
    }

    return 0;
}
```

22. Display First 10 Even Numbers

```
#include <stdio.h>

int main() {
   int i;

   for (i = 1; i <= 10; i++) {
      printf("%d ", 2 * i);
   }

   return 0;
}
```

23. Display First 10 Odd Numbers

```
#include <stdio.h>

int main() {
   int i;

   for (i = 1; i <= 10; i++) {
      printf("%d ", 2 * i - 1);
   }

   return 0;
}
```

24. Display Even Numbers from 50 to 60 and their Sum

```
#include <stdio.h>

int main() {
   int i, sum = 0;

   for (i = 50; i <= 60; i++) {
      if (i % 2 == 0) {
         printf("%d ", i);
         sum = sum + i;
      }
   }
   printf("Sum is %d", sum);
   return 0;
}
```

25. Display Sum of Even Numbers from 50 to 60

```
#include <stdio.h>

int main() {
   int i, sum = 0;

   for (i = 50; i <= 60; i++) {
      if (i % 2 == 0) {
         sum = sum + i;
```

```
        }
    }
    printf("Sum is %d", sum);
    return 0;
}
```

26. Display Series 1, 2, 4, 8, 16, ... up to 10th Term

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

int main() {
    int i;

    for (i = 0; i < 10; i++) {
        printf("%f ", pow(2, i));
    }

    return 0;
}
```

27. Factorial of a Number

```
#include <stdio.h>

int main() {
    int i, n, fact = 1;

    printf("Enter a number: ");
    scanf("%d", &n);

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

    printf("Factorial = %d", fact);

    return 0;
}
```

28. Fibonacc Series (0,1,1,2,3,5,8,...) up to n Terms

```
#include <stdio.h>

int main() {
    int a = 0, b = 1, c, n, i;

    printf("Enter number of terms: ");
    scanf("%d", &n);

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

    for (i = 3; i <= n; i++) {
        c = a + b;
        printf("%d ", c);
```

```
        a = b;
        b = c;
    }

    return 0;
}
```