Loop(লুপ)

1(1).Prints ten times a letter using for loop.

1(2).Prints ten times a letter using while loop.

1(3).Prints ten times a letter using do while loop.

2(1).Even number between 1 - 100.

2(2).Odd number between 1 - 100.

3. Uses of breakand continue statement.

4. Making a Multiple table.

5. Factorial Print.

6. Prime number print.

7. GCD and LCM.

8. Display sum of a digit.

9. Reverse an Integer.

10. Palindrome number.

11(1).Armstrong number or not.

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12. Counting number of a digit in an integer.

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14(1).Basic Multiple Table(নামতা তৈরি করা)

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15. ১ - ২০ পর্যন্ত সবগুলো সংখ্যার নামতা

16(1).Uses of break statement.

16(2).Uses of continue statement.

16(3).Uses of continue statement.

17. Input - Output

1(1). Prints ten times a letter using for loop.

Output:

1. kibria

2. kibria

3. kibria

4. kibria

5. kibria

6. kibria

7. kibria

8. kibria

9. kibria

10.kibria

#include <stdio.h>

int main()

{

int i;

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

{

printf("%d. kibria\n", i);

}

}

1(2). Prints ten times a letter using while loop.

Output:

1. Kibria

2. Kibria

3. Kibria

4. Kibria

5. Kibria

6. Kibria

7. Kibria

8. Kibria

9. Kibria

10.Kibria

#include <stdio.h>

int main()

{

int i = 1;

while (i <= 10)

{

printf("%2d. Kibria\n", i);

i++;

}

}

1(3). Prints ten times a letter using do while loop.

Output:

1. kibria

2. kibria

3. kibria

4. kibria

5. kibria

6. kibria

7. kibria

8. kibria

9. kibria

10.kibria

#include <stdio.h>

int main()

{

int i = 1;

do

{

printf("%d. kibria\n", i);

i++;

} while (i <= 10);

}

2(1). Even number between 1 - 100.

Output:

2

4

6

8

10

12

-

-

#include <stdio.h>

int main()

{

int i;

for (i = 2; i <= 100; i = i + 2)

{

printf("%d\n", i);

}

}

2(2). Odd number between 1 - 100.

Output:

1

3

5

7

-

-

#include <stdio.h>

int main()

{

int i;

for (i = 1; i <= 100; i = i + 2)

{

printf("%d\n", i);

}

}

3. Uses of breakand continue statement.

Output:

1

2

4

5

7

8

10

#include <stdio.h>

int main()

{

int i;

for (i = 1; i < 20; i++)

{

if (i % 3 == 0)

{

continue;

}

printf("%d\n", i);

if (i == 10)

{

break;

}

}

}

4. Making a Multiple table.

Output:

Enter any number = 5

5 X 1 = 5

5 X 2 = 10

5 X 3 = 15

5 X 4 = 20

5 X 5 = 25

5 X 6 = 30

5 X 7 = 35

5 X 8 = 40

5 X 9 = 45

5 X 10 = 50

#include <stdio.h>

int main()

{

int i, num;

printf("Enter any number = ");

scanf("%d", &num);

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

{

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

}

return 0;

}

5. Factorial Print.

Output:

Enter any positive number = 4

The Factorial of 4 is = 24

#include <stdio.h>

int main()

{

int i, num, factorial = 1;

printf("Enter any positive number = ");

scanf("%d", &num);

for (i = 1; i <= num; i++)

{

factorial = factorial \* i;

}

printf("The Factorial of %d is = %d\n", num, factorial);

return 0;

}

6. Prime number print.

Output:

Enter a number = 5

This is a prime number

#include <stdio.h>

int main()

{

int num, i, count = 0;

printf("Enter a number = ");

scanf("%d", &num);

for (i = 2; i < num; i++)

{

if (num % 2 == 0)

{

count++;

break;

}

}

if (count == 0)

printf("This is a prime number\n");

else

printf("This is not a prime number\n");

}

7. GCD and LCM.

Output:

Please enter two number = 12 20

The GCD is = 4

The LCM is = 60

#include <stdio.h>

int main()

{

int num1, num2, n1, n2, rem, gcd, lcm;

printf("Please enter two number = ");

scanf("%d %d", &num1, &num2);

n1 = num1;

n2 = num2;

while (n2 != 0)

{

rem = n1 % n2;

n1 = n2;

n2 = rem;

}

gcd = n1;

lcm = (num1 \* num2) / gcd;

printf("The GCD is = %d\n", gcd);

printf("The LCM is = %d\n", lcm);

}

8. Display sum of a digit.

Output:

Enter any number = 137

The sum is = 11

#include <stdio.h>

int main()

{

int num, temp, rem, sum = 0;

printf("Enter any number = ");

scanf("%d", &num);

temp = num;

while (temp != 0)

{

rem = temp % 10;

temp = temp / 10;

sum = sum + rem;

}

printf("The sum is = %d\n", sum);

}

9. Reverse an Integer.

Output:

Enter any number = 123

Reverse of the number is = 321

#include <stdio.h>

int main()

{

int num, rem, temp, sum = 0;

printf("Enter any number = ");

scanf("%d", &num);

temp = num;

while (temp != 0)

{

rem = temp % 10;

temp = temp / 10;

sum = sum \* 10 + rem;

}

printf("Reverse of the number is = %d\n", sum);

}

10. Palindrome number.

Output:

Enter any number = 123

This is not a palindrome number

Enter any number = 121

This is a palindrome number

#include <stdio.h>

int main()

{

int num, rem, temp, sum = 0;

printf("Enter any number = ");

scanf("%d", &num);

temp = num;

while (temp != 0)

{

rem = temp % 10;

temp = temp / 10;

sum = sum \* 10 + rem;

}

if (sum == num)

printf("This is a palindrome number\n");

else

printf("This is not a palindrome number\n");

}

11(1). Armstrong number or not.

Output:

Enter the number = 128

This is not a armstrong number

Enter the number = 153

This is a armstrong number

#include <stdio.h>

int main()

{

int num, i, temp, rem, sum = 0;

printf("Enter the number = ");

scanf("%d", &num);

temp = num;

while (temp != 0)

{

rem = temp % 10;

temp = temp / 10;

sum = sum + rem \* rem \* rem;

}

if (sum == num)

printf("This is a armstrong number\n");

else

printf("This is not a armstrong number\n");

}

11(2) - Armstrong number between 1 - 1000.

Output:

Initial value = 1

Final value = 1000

1

153

370

371

407

#include <stdio.h>

int main()

{

int initialvalue, finalvalue, rem, i, temp, sum = 0;

printf("Initial value = ");

scanf("%d", &initialvalue);

printf("Final value = ");

scanf("%d", &finalvalue);

for (i = initialvalue; i < finalvalue; i++)

{

temp = i;

while (temp != 0)

{

rem = temp % 10;

temp = temp / 10;

sum = sum + rem \* rem \* rem;

}

if (sum == i)

{

printf("%d\n", i);

}

sum = 0;

}

}

12. Counting number of a digit in an integer.

Output:

Please enter the number = 134

Total number of digit = 3

#include <stdio.h>

int main()

{

int num, count = 0;

printf("Please enter the number = ");

scanf("%d", &num);

while (num != 0)

{

num = num / 10;

++count;

}

printf("Total number of digit = %d\n", count);

}

13. Strong number printf. (ফ্যাক্টরিয়াল গুলোর যোগফল ঐ সংখ্যাটির সমান)

strong number = 145 = 1! + 4! + 5! = 145.

Output:

Enter the number = 145

This is a strong number

#include <stdio.h>

int main()

{

int num, i, rem, temp, sum = 0, fact;

printf("Enter the number = ");

scanf("%d", &num);

temp = num;

while (temp != 0)

{

rem = temp % 10;

temp = temp / 10;

fact = 1;

for (i = 1; i <= rem; i++)

{

fact = fact \* i;

}

sum = sum + fact;

}

if (sum == num)

printf("This is a strong number\n");

else

printf("This is not a strong number\n");

}

14(1). Basic Multiple Table(নামতা তৈরি করা)

Output:

5 X 1 = 5

5 X 2 = 10

5 X 3 = 15

5 X 4 = 20

5 X 5 = 25

5 X 6 = 30

5 X 7 = 35

5 X 8 = 40

5 X 9 = 45

5 X 10 = 50

#include <stdio.h>

int main()

{

int i, n = 5;

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

{

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

}

}

14(2). Basic Multiple Table(যোগের মাধ্যমে নামতা তৈরি করা)

Output:

5 X 1 = 5

5 X 2 = 10

5 X 3 = 15

5 X 4 = 20

5 X 5 = 25

5 X 6 = 30

5 X 7 = 35

5 X 8 = 40

5 X 9 = 45

5 X 10 = 50

#include <stdio.h>

int main()

{

int i, sum = 0, n = 5;

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

{

sum = sum + n;

printf("%d X %d = %d\n", n, i, sum);

}

}

15. ১-২০ পর্যন্ত সবগুলো সংখ্যার নামতা

Output:

1 X 1 = 1

1 X 2 = 2

1 X 3 = 3

1 X 4 = 4

1 X 5 = 5

1 X 6 = 6

1 X 7 = 7

1 X 8 = 8

1 X 9 = 9

1 X 10 = 10

-------------

#include <stdio.h>

int main()

{

int i, j;

for (i = 1; i <= 20; i++)

{

for (j = 1; j <= 10; j++)

{

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

}

printf("\n");

}

}

16(1). Uses of break statement.

Output:

1

2

3

4

5

6

7

8

9

10

#include <stdio.h>

int main()

{

int i;

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

{

printf("%d\n", i);

if (i >= 10)

{

break;

}

}

}

16(2). Uses of continue statement.

\*

Output:

1

3

5

7

9

#include <stdio.h>

int main()

{

int i;

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

{

if (i % 2 == 0)

{

continue;

}

printf("%d\n", i);

}

}

16(3). Uses of continue statement.

Output:

Enter the value of n = 1

Enter the value of m = 10

10

#include <stdio.h>

int main()

{

int n, m, i, j;

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

scanf("%d", &n);

for (i = 0; i < n; i++)

{

printf("Enter the value of m = ");

scanf("%d", &m);

for (j = 10; j <= m; j++)

{

if (j % 11 == 0)

{

continue;

}

printf("%d\n", j);

}

}

}

17. Input-Output

Output:

1 2 3

1 3 2

2 1 3

2 3 1

3 1 2

3 2 1

#include <stdio.h>

int main()

{

int a, b, c;

for (a = 1; a <= 3; a++)

{

for (b = 1; b <= 3; b++)

{

for (c = 1; c <= 3; c++)

{

if (a != b && a != c && b != c)

{

printf("%d %d %d\n", a, b, c);

}

}

}

}

return 0;

}

Pattern(প্যার্টান)

Patten type – 01

#include <stdio.h>

int main()

{

int n, row, col;

printf("Enter n = ");

scanf("%d", &n);

for (row = 1; row <= n; row++)

{

for (col = 1; col <= row; col++)

{

printf("%d ", col);

}

printf("\n");

}

return 0;

}

Output:

Enter n = 3

1

1 2

1 2 3

2. printf("%d ", row);

3. printf("%d ", col % 2);

4. printf("%d ", row % 2);

5. printf("%c ", col + 64);

6. printf("%c ", row + 64);

7. printf("%c ", col + 96);

8. printf("%c ", row + 96);

9. printf("\* ");

10.printf("# ");

Patten type – 02.

#include <stdio.h>

int main()

{

int n, row, col;

printf("Enter n = ");

scanf("%d", &n);

for (row = n; row >= 1; row--)

{

for (col = 1; col <= row; col++)

{

printf("%d ", col);

}

printf("\n");

}

return 0;

}

Output:

Enter n = 3

1 2 3

1 2

1

2. printf("%d ", row);

3. printf("%d ", col % 2);

4. printf("%d ", row % 2);

5. printf("%c ", col + 64);

6. printf("%c ", row + 64);

7. printf("%c ", col + 96);

8. printf("%c ", row + 96);

9. printf("\* ");

10.printf("# ");

Patten type – 03.

#include <stdio.h>

int main()

{

int n, row, col;

printf("Enter n = ");

scanf("%d", &n);

for (row = 1; row <= n; row++)

{

for (col = 1; col <= row; col++)

{

printf("%d ", col);//2 space

}

printf("\n");

}

for (row = n - 1; row >= 1; row--)

{

for (col = 1; col <= row; col++)

{

printf("%d ", col);//2 space

}

printf("\n");

}

return 0;

}

Output:

Enter n = 3

1

1 2

1 2 3

1 2

1

2. printf("%d ", row);//dui bar kory hoby.

3. printf("%d ", col % 2);

4. printf("%d ", row % 2);

5. printf("%c ", col + 64);

6. printf("%c ", row + 64);

7. printf("%c ", col + 96);

8. printf("%c ", row + 96);

9. printf("\* ");

10.printf("# ");

Patten type – 04.

#include <stdio.h>

int main()

{

int n, row, col;

printf("Enter n = ");

scanf("%d", &n);

for (row = 1; row <= n; row++)

{

for (col = 1; col <= n - row; col++)

{

printf(" "); //2 space

}

for (col = 1; col <= row; col++)

{

printf("%d ", col); //1 space

}

printf("\n");

}

return 0;

}

Output:

Enter n = 3

1

1 2

1 2 3

2. printf("%d ", row);// 1 space.

3. printf("%d ", col % 2);

4. printf("%d ", row % 2);

5. printf("%c ", col + 64);

6. printf("%c ", row + 64);

7. printf("%c ", col + 96);

8. printf("%c ", row + 96);

9. printf("\* ");

10.printf("# ");

Patten type – 05.

#include <stdio.h>

int main()

{

int n, row, col;

printf("Enter n = ");

scanf("%d", &n);

for (row = n; row >= 1; row--)

{

for (col = 1; col <= n - row; col++)

{

printf(" "); //2 space

}

for (col = 1; col <= row; col++)

{

printf("%d ", col); //1 space

}

printf("\n");

}

return 0;

}

Output:

Enter n = 3

1 2 3

1 2

1

2. printf("%d ", row);//1 space.

3. printf("%d ", col % 2);

4. printf("%d ", row % 2);

5. printf("%c ", col + 64);

6. printf("%c ", row + 64);

7. printf("%c ", col + 96);

8. printf("%c ", row + 96);

9. printf("\* ");

10.printf("# ");

Patten type – 06.

#include <stdio.h>

int main()

{

int n, row, col;

printf("Enter n = ");

scanf("%d", &n);

for (row = 1; row <= n; row++)

{

for (col = 1; col <= n - row; col++)

printf(" "); //2 space

for (col = 1; col <= row; col++)

printf("%d ", col); //1 space

printf("\n");

}

for (row = n - 1; row >= 1; row--)

{

for (col = 1; col <= n - row; col++)

printf(" "); //2 space

for (col = 1; col <= row; col++)

printf("%d ", col); //1 space

printf("\n");

}

}

Output:

Enter n = 3

1

1 2

1 2 3

1 2

1

2. printf("%d ", row);//1 space. dui bar kory hoby.

3. printf("%d ", col % 2);

4. printf("%d ", row % 2);

5. printf("%c ", col + 64);

6. printf("%c ", row + 64);

7. printf("%c ", col + 96);

8. printf("%c ", row + 96);

9. printf("\* ");

10.printf("# ");

Pattern type- 07

#include <stdio.h>

int main()

{

int n, row, col;

printf("Enter n = ");

scanf("%d", &n);

for (row = 1; row <= n; row++)

{

for (col = 1; col <= n; col++)

{

printf("%d ", col); //2 space

}

printf("\n");

}

return 0;

}

Output:

Enter n = 3

1 2 3

1 2 3

1 2 3

Pattern type- 08

#include <stdio.h>

int main()

{

int n, row, col;

printf("Enter n = ");

scanf("%d", &n);

for (row = 1; row <= n; row++)

{

for (col = 1; col <= n - row; col++)

{

printf(" "); //2 space

}

for (col = 1; col <= 2 \* row - 1; col++)

{

printf("%d ", col);//1 space

}

printf("\n");

}

return 0;

}

Output:

Enter n = 3

1

1 2 3

1 2 3 4 5

Pattern type- 09

#include <stdio.h>

int main()

{

int n, row, col;

printf("Enter n = ");

scanf("%d", &n);

for (row = n; row >= 1; row--)

{

for (col = 1; col <= n - row; col++)

{

printf(" "); //2 space

}

for (col = 1; col <= 2 \* row - 1; col++)

{

printf("%d ", col);//1 space

}

printf("\n");

}

return 0;

}

Output:

Enter n = 3

1 2 3 4 5

1 2 3

1

Pattern type- 10

#include <stdio.h>

int main()

{

int n, row, col;

printf("Enter n = ");

scanf("%d", &n);

for (row = 1; row <= n; row++)

{

for (col = 1; col <= n - row; col++)

{

printf(" "); //2 space

}

for (col = 1; col <= 2 \* row - 1; col++)

{

printf("%d ", col);//1 space

}

printf("\n");

}

for (row = n - 1; row >= 1; row--)

{

for (col = 1; col <= n - row; col++)

{

printf(" "); //2 space

}

for (col = 1; col <= 2 \* row - 1; col++)

{

printf("%d ", col);//1 space

}

printf("\n");

}

return 0;

}

Enter n = 3

1

1 2 3

1 2 3 4 5

1 2 3

1

Pattern type- 11

#include <stdio.h>

int main()

{

int n, row, col;

printf("Enter n = ");

scanf("%d", &n);

for (row = 1; row <= n; row++)

{

for (col = 1; col <= n - row; col++)

{

printf(" "); //1 space

}

for (col = 1; col <= row; col++)

{

printf("%d ", col);//1 space

}

printf("\n");

}

return 0;

}

Output:

Enter n = 3

1

1 2

1 2 3

Pattern type- 12

#include <stdio.h>

int main()

{

int n, row, col;

printf("Enter n = ");

scanf("%d", &n);

for (row = n; row >= 1; row--)

{

for (col = 1; col <= n - row; col++)

{

printf(" "); //1 space

}

for (col = 1; col <= row; col++)

{

printf("%d ", col);//1 space

}

printf("\n");

}

return 0;

}

Output:

Enter n = 3

1 2 3

1 2

1

Pattern type- 13

#include <stdio.h>

int main()

{

int n, row, col;

printf("Enter n = ");

scanf("%d", &n);

for (row = 1; row <= n; row++)

{

for (col = 1; col <= n - row; col++)

{

printf(" "); //1 space

}

for (col = 1; col <= row; col++)

{

printf("%d ", col);//1 space

}

printf("\n");

}

for (row = n - 1; row >= 1; row--)

{

for (col = 1; col <= n - row; col++)

{

printf(" "); //1 space

}

for (col = 1; col <= row; col++)

{

printf("%d ", col);//1 space

}

printf("\n");

}

return 0;

}

Output:

Enter n = 3

1

1 2

1 2 3

1 2

1

Pattern type- 14

#include <stdio.h>

int main()

{

int n, row, col;

printf("Enter n = ");

scanf("%d", &n);

for (row = 1; row <= n; row++)

{

for (col = 1; col <= row; col++)

{

printf("%d ", row \* col); //1 space

}

printf("\n");

}

return 0;

}

Output:

Enter n = 3

1

2 4

3 6 9

Pattern type- 15

#include <stdio.h>

int main()

{

int n, row, col;

printf("Enter n = ");

scanf("%d", &n);

for (row = 1; row <= n; row++)

{

for (col = 1; col <= n; col++)

{

if (row == 1 || row == n || col == 1 || col == n)

printf("\* "); //1 space

else

printf(" "); //2 space

}

printf("\n");

}

return 0;

}

Output:

Enter n = 5

\* \* \* \* \*

\* \*

\* \*

\* \*

\* \* \* \* \*

Pattern type- 16

#include <stdio.h>

int main()

{

int n, row, col;

printf("Enter n = ");

scanf("%d", &n);

for (row = 1; row <= n; row++)

{

for (col = 1; col <= n; col++)

{

if (row == n || col == 1 || row == col)

printf("\* "); //1 space

else

printf(" "); //2 space

}

printf("\n");

}

return 0;

}

Output:

Enter n = 5

\*

\* \*

\* \*

\* \*

\* \* \* \* \*

Pattern type- 17

#include <stdio.h>

int main()

{

int n, row, col;

printf("Enter n = ");

scanf("%d", &n);

for (row = 1; row <= n; row++)

{

for (col = 1; col <= n; col++)

{

if (row == col || row + col == n+1)

{

printf("\* "); //1 space

}

else

{

printf(" "); //2 space

}

}

printf("\n");

}

return 0;

}

**Output:**

**Enter n = 5**

**\* \***

**\* \***

**\***

**\* \***

**\* \***

Pattern type- 18

#include <stdio.h>

int main()

{

int n, row, col, count = 0;

printf("Enter n = ");

scanf("%d", &n);

for (row = 1; row <= n; row++)

{

for (col = 1; col <= row; col++)

{

printf("%d ", ++count);

}

printf("\n");

}

return 0;

}

Output:

Enter n = 3

1

2 3

4 5 6

Pattern type- 19

#include <stdio.h>

int main()

{

int n, row, col;

printf("Enter n = ");

scanf("%d", &n);

for (row = 1; row <= n; row++)

{

for (col = 1; col <= n - row; col++)

{

printf(" "); //2 space

}

for (col = 1; col <= row; col++)

{

printf("%d ", col); //1 space

}

for (col = row - 1; col >= 1; col--)

{

printf("%d ", col); //1 space

}

printf("\n");

}

return 0;

}

Output:

Enter n = 3

1

1 2 1

1 2 3 2 1

Pattern type- 20

#include <stdio.h>

int main()

{

int n, row, col;

printf("Enter n = ");

scanf("%d", &n);

for (row = n; row >= 1; row--)

{

for (col = 1; col <= n - row; col++)

{

printf(" "); //2 space

}

for (col = 1; col <= row; col++)

{

printf("%d ", col); //1 space

}

for (col = row - 1; col >= 1; col--)

{

printf("%d ", col); //1 space

}

printf("\n");

}

return 0;

}

Output:

Enter n = 3

1 2 3 2 1

1 2 1

1

Pattern type- 21

Output:

Enter n = 3

1

1 2 1

1 2 3 2 1

1 2 1

1

#include <stdio.h>

int main()

{

int n, row, col;

printf("Enter n = ");

scanf("%d", &n);

for (row = 1; row <= n; row++)

{

for (col = 1; col <= n - row; col++)

{

printf(" "); //2 space

}

for (col = 1; col <= row; col++)

{

printf("%d ", col); //1 space

}

for (col = row - 1; col >= 1; col--)

{

printf("%d ", col); //1 space

}

printf("\n");

}

for (row = n -1; row >= 1; row--)

{

for (col = 1; col <= n - row; col++)

{

printf(" "); //2 space

}

for (col = 1; col <= row; col++)

{

printf("%d ", col); //1 space

}

for (col = row - 1; col >= 1; col--)

{

printf("%d ", col); //1 space

}

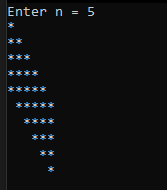
printf("\n");

}

return 0;

}

Pattern type - 22



#include <stdio.h>

int main()

{

int n, row, col;

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

scanf("%d", &n);

for (row = 1; row <= n; row++)

{

for (col = 1; col <= row; col++)

{

printf("\*");

}

printf("\n");

}

for (row = n; row >=1; row--)

{

for (col = 1; col <= (n-row)+1; col++)

{

printf(" ");

}

for (col = 1; col <= row; col++)

{

printf("\*");

}

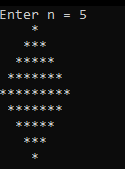
printf("\n");

}

return 0;

}

Pattern type - 23



#include <stdio.h>

int main()

{

int n, row, col;

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

scanf("%d", &n);

for (row = 1; row <= n; row++)

{

for (col = 1; col <= n - row; col++)

{

printf(" ");

}

for (col = 1; col <= 2 \* row - 1; col++)

{

printf("\*");

}

printf("\n");

}

for (row = n-1; row >= 1; row--)

{

for (col = 1; col <= n - row; col++)

{

printf(" ");

}

for (col = 1; col <= 2 \* row - 1; col++)

{

printf("\*");

}

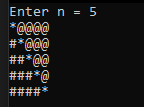
printf("\n");

}

return 0;

}

Pattern type - 24



#include <stdio.h>

int main()

{

int n, row, col;

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

scanf("%d", &n);

for (row = 1; row <= n; row++)

{

for (col = 1; col <= n; col++)

{

if (row == col)

printf("\*");

else if (row > col)

printf("#");

else if (row < col)

printf("@");

}

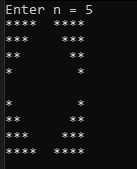
printf("\n");

}

return 0;

}

Pattern type - 25



#include <stdio.h>

int main()

{

int n, row, col;

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

scanf("%d", &n);

for (row = n-1; row >= 1; row--)

{

for (col = 1; col <= row; col++)

{

printf("\*");

}

for (col = 1; col <= (2 \* n) - (2 \* row); col++)

{

printf(" ");

}

for (col = 1; col <= row; col++)

{

printf("\*");

}

printf("\n");

}

printf("\n");

for (row = 1; row <= n-1; row++)

{

for (col = 1; col <= row; col++)

{

printf("\*");

}

for (col = 1; col <= (2 \* n) - (2 \* row); col++)

{

printf(" ");

}

for (col = 1; col <= row; col++)

{

printf("\*");

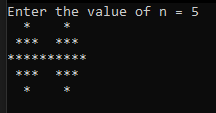
}

printf("\n");

}

}

Pattern type – 26



#include <stdio.h>

int main()

{

int n, row, col;

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

scanf("%d", &n);

for (row = 1; row <= n-2; row++)

{

for (col = 1; col <= (n-2) - row; col++)

{

printf(" ");

}

for (col = 1; col <= 2 \* row - 1; col++)

{

printf("\*");

}

for (col = 1; col <= ((2 \* n-2) - (2 \* row))-2; col++)

{

printf(" ");

}

for (col = 1; col <= 2 \* row - 1; col++)

{

printf("\*");

}

printf("\n");

}

for (row = (n-2)-1; row >= 1; row--)

{

for (col = 1; col <= (n - 2) - row; col++)

{

printf(" ");

}

for (col = 1; col <= 2 \* row - 1; col++)

{

printf("\*");

}

for (col = 1; col <= ((2 \* n - 2) - (2 \* row)) - 2; col++)

{

printf(" ");

}

for (col = 1; col <= 2 \* row - 1; col++)

{

printf("\*");

}

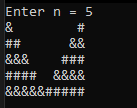
printf("\n");

}

return 0;

}

Pattern type – 27



#include <stdio.h>

int main()

{

int n, row, col;

printf("Enter n = ");

scanf("%d", &n);

for (row = 1; row <= n; row++)

{

for (col = 1; col <= row; col++)

{

if (row % 2 == 0)

printf("#");

else

printf("&");

}

for (col = 1; col <= (2 \* n) - (2 \* row); col++)

{

printf(" ");

}

for (col = 1; col <= row; col++)

{

if (row % 2 == 0)

printf("&");

else

printf("#");

}

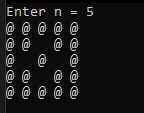
printf("\n");

}

return 0;

}

Pattern type - 28



#include <stdio.h>

int main()

{

int n, row, col;

printf("Enter n = ");

scanf("%d", &n);

for (row = 1; row <= n; row++)

{

for (col = 1; col <= n; col++)

{

if (row == 1 || row == n || col == 1 || col == n || row == col || row + col == n + 1)

printf("@ ");

else

printf(" ");

}

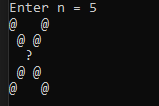
printf("\n");

}

return 0;

}

Pattern type – 29



#include <stdio.h>

int main()

{

int n, row, col;

printf("Enter n = ");

scanf("%d", &n);

for (row = 1; row <= n; row++)

{

for (col = 1; col <= n; col++)

{

if (row == col && row + col == n + 1)

printf("?");

else if (row == col || row + col == n + 1)

printf("@");

else

printf(" ");

}

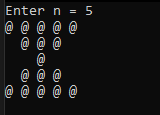
printf("\n");

}

return 0;

}

Pattern type – 30



#include <stdio.h>

int main()

{

int n, row, col;

printf("Enter n = ");

scanf("%d", &n);

for (row = 1; row <= n; row++)

{

for (col = 1; col <= n; col++)

{

if (row == 1 || row == n || row == col || row + col == n + 1 || col == n - 2)

printf("@ ");

else

printf(" ");

}

printf("\n");

}

return 0;

}

Series(সিরিজ)

1. 1 + 2 + 3 + ---------- + n.(Using for loop)

2. 1 + 3 + 5 + ---------- + n.(Using for loop)

3. 2 + 4 + 6 + ---------- + n.(Using for loop)

4. 1 + 2 + 3 + ---------- + n.(Using while loop)

5. 1 + 3 + 5 + ---------- + n.(Using while loop)

6. 2 + 4 + 6 + ---------- + n.(Using while loop)

7. 1 \* 2 + 2 \* 3 + 3 \* 4 + ---------- - +n1 \* n2.

8. 1 \* 3 + 2 \* 5 + 3 \* 7 + ---------- - +n1 \* n2.

9. 1 \* 3 \* 4 + 2 \* 5 \* 6 + 3 \* 7 \* 8 + ---------- - +n1 \* n2 \* n3.

10. 1 2 3-------- - n.

11. 1 3 5-------- - n.

12. 2 4 6-------- - n.

13. 1.5 + 2.5 + 3.5 + ------------ - +n.

14. 12 + 22 + 32 + ------------ - +n2

15. 13 + 23 + 33 + ------------ - +n3

16. 12 + 32 + 52 + ------------ - +n2

17. 1 + ½ + 1 / 3 + ---------- - +1 / n.

18. 1 × 2 × 3 ×------------ - × n.

19. 12 x 22 x 32 x------------xn2

20. 13 x 23 x 33 x------------xn3

21. 13 x 33 x 53 x------------xn3

22. 22 x 42 x 62 x------------xn2

23. 12 x 32 x 52 x------------xn2

24. 1 - 2 + 3 - 4 + 5 - 6 + ------------ - +n.//(1+3+5+----)-(2+4+6+-----)

25. Fibonacci Series(0 1 1 2 3)

1. 1 + 2 + 3 + ---------- + n.(Using for loop)

#include <stdio.h>

int main()

{

int n, i, sum = 0;

printf("Enter the last number of the series = ");

scanf("%d", &n);

printf("1+2+3+-----------+%d\n", n);

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

{

sum = sum + i;

}

printf("%d\n", sum);

return 0;

}

2. 1 + 3 + 5 + ---------- + n.(Using for loop)

#include <stdio.h>

int main()

{

int n, i, sum = 0;

printf("Enter the last number of the series = ");

scanf("%d", &n);

printf("1+3+5+-----------+%d\n", n);

for (i = 1; i <= n; i = i + 2)

{

sum = sum + i;

}

printf("%d\n", sum);

return 0;

}

3. 2 + 4 + 6 + ---------- + n.(Using for loop)

#include <stdio.h>

int main()

{

int n, i, sum = 0;

printf("Enter the last number of the series = ");

scanf("%d", &n);

printf("2+4+6+-----------+%d\n", n);

for (i = 2; i <= n; i = i + 2)

{

sum = sum + i;

}

printf("%d\n", sum);

return 0;

}

4. 1 + 2 + 3 + ---------- + n.(Using while loop)

#include <stdio.h>

int main()

{

int n, i = 1, sum = 0;

printf("Enter the last number of the series = ");

scanf("%d", &n);

printf("1 + 2 + 3 + --------------+%d\n", n);

while (i <= n)

{

sum = sum + i;

i = i + 1;

}

printf("%d\n", sum);

return 0;

}

5. 1 + 3 + 5 + ---------- + n.(Using while loop)

#include <stdio.h>

int main()

{

int n, i = 1, sum = 0;

printf("Enter the last number of the series = ");

scanf("%d", &n);

printf("1 + 3 + 5 + --------------+%d\n", n);

while (i <= n)

{

sum = sum + i;

i = i + 2;

}

printf("%d\n", sum);

return 0;

}

6. 2 + 4 + 6 + ---------- + n.(Using while loop)

#include <stdio.h>

int main()

{

int n, i = 2, sum = 0;

printf("Enter the last number of the series = ");

scanf("%d", &n);

printf("2 + 4 + 6 + --------------+%d\n", n);

while (i <= n)

{

sum = sum + i;

i = i + 2;

}

printf("%d\n", sum);

return 0;

}

7. 1\*2 + 2\*3 + 3\*4 +-----------+n1\*n2.

#include <stdio.h>

int main()

{

int n1, n2, i, j, sum = 0;

printf("Enter n1 and n2 = ");

scanf("%d %d", &n1, &n2);

printf("1\*2 + 2\*3 + 3\*4 + -------+%d\*%d\n", n1, n2);

for (i = 1, j = 2; i <= n1 && j <= n2; i = i + 1, j = j + 1)

{

sum = sum + i \* j;

}

printf("%d\n", sum);

return 0;

}

8. 1\*3 + 2\*5 + 3\*7 +-----------+n1\*n2.

#include <stdio.h>

int main()

{

int n1, n2, i, j, sum = 0;

printf("Enter n1 and n2 = ");

scanf("%d %d", &n1, &n2);

printf("1\*3 + 2\*5 + 3\*7 + -------+%d\*%d\n", n1, n2);

for (i = 1, j = 3; i <= n1 && j <= n2; i = i + 1, j = j + 2)

{

sum = sum + i \* j;

}

printf("%d\n", sum);

return 0;

}

9. 1\*3\*4 + 2\*5\*6 + 3\*7\*8 +-----------+n1\*n2\*n3.

#include <stdio.h>

int main()

{

int n1, n2, n3, i, j, k, sum = 0;

printf("Enter n1 and n2 = ");

scanf("%d %d %d", &n1, &n2, &n3);

printf("1\*3\*4 + 2\*5\*6 + 3\*7\*8 + -------+%d\*%d\*%d\n", n1, n2, n3);

for (i = 1, j = 3, k = 4; i <= n1 && j <= n2 && k<=n3; i = i + 1, j = j + 2, k = k+2)

{

sum = sum + i \* j \* k;

}

printf("%d\n", sum);

return 0;

}

10. 1 2 3---------n.

#include <stdio.h>

int main()

{

int n, i;

printf("Enter n = ");

scanf("%d", &n);

printf("1 2 3----------%d\n", n);

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

{

printf("%d ", i);

}

return 0;

}

11. 1 3 5---------n.

#include <stdio.h>

int main()

{

int n, i;

printf("Enter n = ");

scanf("%d", &n);

printf("1 3 5----------%d\n", n);

for (i = 1; i <= n; i = i + 2)

{

printf("%d ", i);

}

return 0;

}

12. 2 4 6---------n.

#include <stdio.h>

int main()

{

int n, i;

printf("Enter n = ");

scanf("%d", &n);

printf("2 4 6----------%d\n", n);

for (i = 2; i <= n; i = i + 2)

{

printf("%d ", i);

}

return 0;

}

13. 1.5 + 2.5 + 3.5 +-------------+n.

#include <stdio.h>

int main()

{

float n, i, sum = 0;

printf("Enter n = ");

scanf("%f", &n);

printf("1.5 + 2.5 + 3.5 +-----------+%f\n", n);

for (i = 1.5; i <= n; i = i+1)

{

sum = sum + i;

}

printf("%.2f\n", sum);

return 0;

}

14. 12 + 22 + 32 +-------------+n2

#include <stdio.h>

int main()

{

int n, i, sum = 0;

printf("Enter n = ");

scanf("%d", &n);

printf("1^2 + 2^2 + 3^3 +-------+%d^%d\n", n, n);

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

{

sum = sum + i \* i;

}

printf("%d\n", sum);

return 0;

}

15. 13 + 23 + 33 +-------------+n3

#include <stdio.h>

int main()

{

int n, i, sum = 0;

printf("Enter n = ");

scanf("%d", &n);

printf("1^3 + 2^3 + 3^3 +-------+%d^%d\n", n, n);

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

{

sum = sum + i \* i \* i;

}

printf("%d\n", sum);

return 0;

}

16. 12 + 32 + 52 +-------------+n2

#include <stdio.h>

int main()

{

int n, i, sum = 0;

printf("Enter n = ");

scanf("%d", &n);

printf("1^2 + 3^2 + 5^2 +-------+%d^2\n", n);

for (i = 1; i <= n; i = i + 2)

{

sum = sum + i \* i;

}

printf("%d\n", sum);

return 0;

}

17 . 1 + ½ + 1/3 +-----------+1/n.

#include <stdio.h>

int main()

{

double n, i, sum = 0;

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

scanf("%lf", &n);

printf("1 + 1/2 + 1/3 +-----------+1/%lf\n", n);

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

{

sum = sum + (1 / i);

}

printf("%.2lf\n", sum);

return 0;

}

18. 1 × 2 × 3 ×-------------× n.

#include <stdio.h>

int main()

{

int n, i, result = 1;

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

scanf("%d", &n);

printf("1 X 2 X 3 X------------X %d\n", n);

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

{

result = result \* i;

}

printf("%d\n", result);

return 0;

}

19. 12 x 22 x 32 x------------xn2

#include <stdio.h>

int main()

{

int n, i, result = 1;

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

scanf("%d", &n);

printf("1^2 X 2^2 X 3^2 X-----------X%d^2\n", n);

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

{

result = result \* i \* i;

}

printf("%d\n", result);

return 0;

}

20. 13 x 23 x 33 x------------xn3

#include <stdio.h>

int main()

{

int n, i, result = 1;

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

scanf("%d", &n);

printf("1^3 X 2^3 X 3^3 X-----------X%d^3\n", n);

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

{

result = result \* i \* i \* i;

}

printf("%d\n", result);

return 0;

}

21. 13 x 33 x 53 x------------xn3

#include <stdio.h>

int main()

{

int n, i, result = 1;

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

scanf("%d", &n);

printf("1^3 X 3^3 X 5^3 X-----------X%d^3\n", n);

for (i = 1; i <= n; i = i + 2)

{

result = result \* i \* i \* i;

}

printf("%d\n", result);

return 0;

}

22. 22 x 42 x 62 x------------xn2

#include <stdio.h>

int main()

{

int n, i, result = 1;

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

scanf("%d", &n);

printf("2^2 X 4^2 X 6^2 X-----------X%d^2\n", n);

for (i = 2; i <= n; i = i + 2)

{

result = result \* i \* i;

}

printf("%d\n", result);

return 0;

}

23. 12 x 32 x 52 x------------xn2

#include <stdio.h>

int main()

{

int n, i, result = 1;

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

scanf("%d", &n);

printf("1^2 X 3^2 X 5^2 X-----------X%d^2\n", n);

for (i = 1; i <= n; i = i + 2)

{

result = result \* i \* i;

}

printf("%d\n", result);

return 0;

}

24. 1-2+3-4+5-6+-------------+n.//(1+3+5+----)-(2+4+6+-----)

#include <stdio.h>

int main()

{

int n, i, even = 0, odd = 0;

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

scanf("%d", &n);

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

{

if (i % 2 == 0)

{

even = even + i;

}

else

{

odd = odd + i;

}

}

printf("Sum is = %d\n", odd - even);

return 0;

}

25. Fibonacci Series (0 1 1 2 3 )

#include <stdio.h>

int main()

{

int first = 0, second = 1, fibo, count = 0, n;

printf("Enter range = ");

scanf("%d", &n);

while (n > count)

{

if (count <= 1)

{

fibo = count;

}

else

{

fibo = first + second;

first = second;

second = fibo;

}

printf("%d ", fibo);

count++;

}

return 0;

}