

Lab Assignment – 02

Program – 01 :	<pre>#include<stdio.h> int main() { int n; scanf("%d", &n); if(n%2==0) { printf("The Even Number Is: %d\n", n); }else { printf("The Odd Number Is: %d\n", n); } return 0; }</pre>
Program – 02 :	<pre>#include<stdio.h> int main() { int n; scanf("%d", &n); if(n%2==0) { printf("The Even Number Is: %d\n",n*n); }else { printf("The Odd Number Is: %d\n", n*n*n); } return 0; }</pre>
Program – 03 :	<pre>#include<stdio.h> int main() { int a,b,c,sum,avg; scanf("%d%d%d", &a,&b,&c); sum = a+b+c; avg = sum/3; if(avg>=60) { printf("First\n"); }else if(avg>=50 && avg<=59) { printf("Second\n"); } }</pre>

	<pre> }else if(avg>=40 && avg<=49) { printf("Third\n"); }else if(avg<40) { printf("Fail\n"); } return 0; } </pre>
Program – 04 :	<pre> #include<stdio.h> int main() { int n,year; scanf("%d", &n); if(n%4 == 0 && n%400 !=0) { printf("Leap Year : %d\n", n); }else { year = (n+4)-(n%4); printf("Nearest Leap Year: %d\n",year); } return 0; } </pre>
Program – 05 :	<pre> #include<stdio.h> int main() { char a; scanf("%c", &a); if (a== 'A' a== 'a' a== 'E' a== 'e' a== 'I' a== 'i' a== 'o' a== 'O' a== 'U' a== 'u') { printf("Vowel\n"); }else { printf("Consonant\n"); } return 0; } </pre>
Program – 06 :	<pre> #include<stdio.h> int main() { char a; scanf("%c", &a); if (a >= 'a' && a<= 'z') { printf("Small Letter\n"); }else if (a >= 'A' && a<= 'Z') { printf("Capital Letter\n"); }else if (a>=0 a<=9) { printf("Digit\n"); } } </pre>

	<pre> }else { printf("Special Symbol\n"); } return 0; } </pre>
Program – 07 :	<pre> #include<stdio.h> int main() { int a,b,c,max; scanf("%d%d%d", &a,&b,&c); if (a>b) { if (a>c) { max = a; } else { max = c; } }else { if (b>c) { max = b; }else { max = c; } } printf("%d Bigger Number\n", max); return 0; } </pre>
SWITHC STATEMENT	
Program – 01 :	<pre> #include<stdio.h> int main() { int n,a,b,c; printf("1. Add\n"); printf("2. Subtract\n"); printf("3. Multiply\n"); printf("4. Divide\n"); printf("5. Remainder\n"); printf("Choice One: "); scanf("%d", &n); printf("Type Two Number: "); scanf("%d%d",&a,&b); switch (n) { case 1: printf("Sum = %d\n", (a+b)); break; </pre>

	<pre> case 2: printf("Subtract = %d\n", (a-b)); break; case 3: printf("Multiply = %d\n", (a*b)); break; case 4: printf("Divide = %.2f\n", ((float)a/(float)b)); break; case 5: printf("Remainder = %d\n", (a%b)); break; default: printf("Error!\n"); } return 0; } </pre>
Program – 02 :	<pre> #include<stdio.h> int main() { int a,b,c; char n; printf("+. Add\n"); printf("-. Subtract\n"); printf("*. Multiply\n"); printf("/. Divide\n"); printf("%%. Remainder\n"); printf("Choice One: "); scanf("%c", &n); printf("Type Two Number: "); scanf("%d%d",&a,&b); switch (n) { case '+': printf("Sum = %d\n", (a+b)); break; case '-': printf("Subtract = %d\n", (a-b)); break; case '*': printf("Multiply = %d\n", (a*b)); break; case '/': printf("Divide = %.2f\n", ((float)a/(float)b)); break; case '%': printf("Remainder = %d\n", (a%b)); break; default: printf("Error!\n"); } return 0; } </pre>

	}
LOOP STATEMENT	
Program – 03 :	<pre> #include<stdio.h> int main() { int i; for (i=1; i<=100; i++) { printf("%d\n", i); } return 0; } </pre>
Program – 04 :	<pre> #include<stdio.h> int main() { int i; for (i=100; i>=1; i--) { printf("%d\n", i); } return 0; } </pre>
Program – 05 :	<pre> #include<stdio.h> int main() { int i,sum=0; for (i=1; i<=10; i++) { sum +=i; } printf("SUM = %d\n", sum); return 0; } </pre>
Program – 06 :	<pre> #include<stdio.h> int main() { int i,a,sum=0; for (i=0; i<3; i++) { scanf("%d", &a); sum +=a; } printf("SUM = %d\n", sum); return 0; } </pre>
Program – 07 :	<pre> #include<stdio.h> int main() { int i,a,fact=1; </pre>

	<pre> scanf("%d", &a); for (i=1; i<=a; i++) { fact= fact*i; } printf("Factorial IS = %d\n", fact); return 0; } </pre>
Program – 08 :	<pre> #include<stdio.h> int main() { int i,a,b,power; scanf("%d%d", &a,&b); power = pow(a,b); printf("Power Value = %d\n", power); return 0; } </pre>
Program – 09 :	<pre> #include<stdio.h> int main() { int number,remainder,sum=0; scanf("%d", &number); while (number>0) { remainder= number%10; sum +=remainder; number = number/10; } printf("Sum of the digits of Given Number = %d\n", sum); return 0; } </pre>
Program – 10 :	<pre> #include<stdio.h> int main() { int number,count=0; scanf("%d", &number); for (int i = 1; i<=number; i++) { if (number%i == 0) { count++; } } } </pre>

	<pre> if (count == 2) { printf("%d This is a prime number.\n",number); }else{ printf("%d This is not a prime number ", number); } return 0; } </pre>
Program (11.1) :	<pre> #include<stdio.h> int main() { int i,j,k; for (i=1; i<=4; i++) { for(j=1; j<=i; j++) { printf("*"); } printf("\n"); } return 0; } </pre>
Program (11.2) :	<pre> #include<stdio.h> int main() { int i,j,k; for (i=1; i<=5; i++) { for (k=5; k>=i; k--) { printf(" "); } for(j=1; j<=i; j++) { printf("*"); } printf("\n"); } return 0; } </pre>
Program (11.3) :	Copy of program (11.2)
Program (11.4) :	<pre> #include<stdio.h> int main() { int i,j,k; for (i=5; i>=1; i--) { for (k=5; k>=i; k--) { printf(" "); } } } </pre>

	<pre> for(j=1; j<=i; j++) { printf("*"); } printf("\n"); } return 0; } </pre>
Program (11.5) :	<pre> #include<stdio.h> int main() { int i,j,k; for (i=5; i>=1; i--) { for (k=5; k>=i; k--) { printf(" "); } for(j=1; j<=i; j++) { printf("* "); } printf("\n"); } return 0; } </pre>
Program (11.6) :	<pre> #include<stdio.h> int main() { int i,j,k; for (i=1; i<=5; i++) { for (k=5; k>=i; k--) { printf(" "); } for(j=1; j<=i; j++) { printf("* "); } printf("\n"); } return 0; } </pre>
Program (11.7) :	Copy of program (11.5)
Program (11.8) :	<pre> #include<stdio.h> int main() { int i,j,k; for (i=5; i>=1; i--) { for(j=1; j<=i; j++) </pre>

	<pre> { printf("%d", j); } printf("\n"); } return 0; } </pre>
Program (11.9) :	<pre> #include<stdio.h> int main() { int i,j,k; for (i=1; i<=5; i++) { for(j=1; j<=i; j++) { printf("%d", j); } printf("\n"); } return 0; } </pre>
Program (11.10) :	<pre> #include<stdio.h> int main() { int i,j,k; for (i=1; i<=5; i++) { for(j=1; j<=i; j++) { printf("%c", j+64); } printf("\n"); } return 0; } </pre>
Program (11.11) :	<pre> #include<stdio.h> int main() { int i,j,k; for (i=5; i>=1; i--) { for(j=1; j<=i; j++) { printf("%c", j+64); } printf("\n"); } return 0; } </pre>
Program (11.12) :	<pre> #include<stdio.h> int main() { </pre>

	<pre> int i,j,k,count=1; for (i=1; i<=5; i++) { for(j=1; j<=i; j++) { printf("%d", count); count = !count; } Count = j%2; printf("\n"); } return 0; } </pre>
Program (11.13) :	<pre> #include<stdio.h> int main() { int i,j,k=1,count=1; for (i=1; i<=5; i++) { for(j=1; j<=i; j++) { printf("%d ", k++); } printf("\n"); } return 0; } </pre>
Program – (12.1) :	<pre> #include<stdio.h> int main() { int n,i; int t1=0, t2=1; int next_tearm = t1+t2; printf("Enter The Number of terms: "); scanf("%d", &n); printf("Fibonacci Series: %d,%d", t1,t2); for (i=1; i<=n; i++) { t1=t2; t2=next_tearm; next_tearm = t1+t2; printf(",%d", next_tearm); } return 0; } </pre>
Program – (12.2) :	<pre> #include<stdio.h> #include<math.h> int main() { int n,i,value; </pre>

	<pre> for (i=1; i<=8; i++) { value = pow(2,i); printf("%d ",value); } return 0; } </pre>
Program – (12.3) :	<pre> #include<stdio.h> int main() { int n,i,a=1,b; printf("Enter The Number of terms: "); scanf("%d", &n); for (i=1; i<=n; i+=3) { a*=1; b=i; b*=a; printf("%d ",b); } return 0; } </pre>
Program – (12.4) :	<pre> #include<stdio.h> int main() { int n,i,a=-1,b; printf("Enter The Number of terms: "); scanf("%d", &n); for (i=1; i<=n; i+=3) { a*=-1; b=i; b*=a; printf("%d ",b); } return 0; } </pre>
Program – (12.5) :	<pre> #include<stdio.h> #include<math.h> int main() { int n,i,a,b; printf("Enter The Number of terms: "); scanf("%d", &n); for (i=1; i<=n; i++) { </pre>

	<pre> b = pow(i,2)+(i-1); printf("%d ",b); } return 0; } </pre>
Program – (12.6)	<pre> #include<stdio.h> int main () { int i,j,k,sum=0,n,num=1; scanf("%d", &n); for(i=1; i<=n; i++) { num=1; printf("("); for(j=0; j<i; j++) { printf("%d",num); sum+=num; num++; if(j<i-1) { printf("+"); } } printf(")"); } printf("= %d\n", sum); return 0; } </pre>
Program – (12.7)	<pre> #include<stdio.h> int main () { int i,j,k,sum=0,n,num=1; scanf("%d", &n); for(i=1; i<=n; i++) { num=2; printf("("); for(j=0; j<i; j++) { printf("%d",num); sum+=num; num+=2; if(j<i-1) { printf("+"); } } printf(")"); } printf("= %d\n", sum); return 0; } </pre>
Program – (12.8)	<pre> #include<stdio.h> int main () </pre>

	<pre> { int i,j,k,sum=0,n,num=1; scanf("%d", &n); for(i=1; i<=n; i++) { num=1; printf("("); for(j=0; j<i; j++) { printf("%d",num); sum+=num; num+=2; if(j<i-1) { printf("+"); } } printf(")"); } printf("= %d\n", sum); return 0; } </pre>
Program – (12.9)	<pre> #include<stdio.h> int main () { int i,j,k,sum=0,n,num=1; scanf("%d", &n); for(i=1; i<=n; i++) { num=1; printf("("); for(j=0; j<i; j++) { printf("%d^2",num); sum+=num*num; num+=2; if(j<i-1) { printf("+"); } } printf(")"); } printf("= %d\n", sum); return 0; } </pre>
Program – (12.10)	<pre> #include<stdio.h> int main () { int i,j,k,sum=0,n,num=1; scanf("%d", &n); for(i=1; i<=n; i++) { num=2; printf("("); for(j=0; j<i; j++) { </pre>

	<pre> printf("%d^2",num); sum+=num*num; num+=2; if(j<i-1) { printf("+"); } } printf(")"); } printf("= %d\n", sum); return 0; }</pre>
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