|  |  |
| --- | --- |
| Input 1:- | #include<stdio.h>  int main()  {  int i, j, N;  int count;  printf("Enter N: ");  scanf("%d", &N);  count = N \* 2 - 1;  for(i=1; i<=count; i++)  {  for(j=1; j<=count; j++)  {  if(j==i || (j==count - i + 1))  {  printf("\*");  }  else  {  printf(" ");  }  }  printf("\n");  }  return 0;  } |
| Output | A screenshot of a computer  Description automatically generated with low confidence |
| Input 2:- | #include <stdio.h>    long Factorial(int);    int main()  {  int i, Number, j;  printf("\n Please Enter the Number of rows you wish to see in pascal triangle\n");  scanf("%d", &Number);    for (i = 0; i < Number; i++)  {  for (j = 0; j <= (Number - i - 2); j++)  {  printf(" ");  }    for (j = 0; j <= i; j++)  {  printf("%ld ", Factorial(i) / (Factorial(j) \* Factorial(i-j)));  }    printf("\n");  }    return 0;  }    long Factorial(int Number)  {  int i;  long Fact = 1;    for (i = 1; i <= Number; i++)  Fact = Fact \* i;    return Fact;  } |
| Output | Text  Description automatically generated |
| Input 3:- | #include <stdio.h>  int main() {  int rows, i, j, space;  printf("Enter the number of rows: ");  scanf("%d", &rows);  for (i = rows; i >= 1; --i) {  for (space = 0; space < rows - i; ++space)  printf(" ");  for (j = i; j <= 2 \* i - 1; ++j)  printf("\* ");  for (j = 0; j < i - 1; ++j)  printf("\* ");  printf("\n");  }  return 0;  } |
| Output | Graphical user interface, text  Description automatically generated |
| Input 4:- | #include<stdio.h>  int main()  {  int i, j, a, b, c;  printf("Enter the number of Rows : ");  scanf("%d",&i);  for(a=0; a<i; a++)  {  for(b=0; b<(2\*i)-1; b++)  {  if(b<i-a-1 || b>((2\*i)-1)-(i-a))  {  printf(" ");  }  else  {  if(b == i-1)  {  printf("# ");  }  else if(b < i-1)  {  printf("\* ");  }  else if(b > i-1)  {  printf("& ");  }  }  }  printf("\n");  }  return 0;  } |
| Output | Calendar  Description automatically generated |

|  |  |
| --- | --- |
| Question 2:- | Create a program using switch case to find out appropriate area:   1. Area of Rectangle 2. Area of Circle 3. Area of Triangle 4. Exit   Take necessary inputs & choice from the user. |
| Input | #include <stdio.h>  #include <conio.h>  #include <math.h>  int main(void)  {  int num,a,b,c,aot,perim,s,radius,pi,aoc,len,bre,aor;  printf("1.Area of triangle. \n2. Area of circle. \n3.Area of rectangle. \n4.Exit");  printf("\nEnter the process u want to do: ");  scanf("%d",&num);  switch(num)  {  case 1:  printf("\nYou selected Area of triangle");  printf("\nEnter 3 sides of triangle:");  scanf("%d%d%d",&a,&b,&c);  perim=a+b+c;  s=(a+b+c)/2;  aot=sqrt(s\*(s-a)\*(s-b)\*(s-c));  printf("\nArea of triangle=%2.d",aot);  break;  case 2:  printf("\nyou selected area of circle:");  printf("\nEnter radius of the circle:");  scanf("%d",&radius);  pi=22/7;  aoc=pi\*radius\*radius;  printf("\nArea of circle is %d",aoc);  break;  case 3:  printf("\nyou selected Area of rectangle:");  printf("\nEnter length and breath of Rectangle:");  scanf("%d %d",&len,&bre);  printf("\n area of rectangle is %d",len\*bre);  break;  }  while (num!=4);  printf("\n");  return 0;  } |
| Output | Text  Description automatically generated |

|  |  |
| --- | --- |
| Question 4:- | Write a program to create a Rock- Paper- Scissor game using do…While loop. Take the input through the keyboard in character ‘R’ for Rock, ‘P’ for Paper and ‘S’ for Scissor. For termination of the game input should be scissor otherwise game will continue and also print notice if input is inappropriate (other than R, P, S). |
| Input | #include<stdio.h>  int main()  {  char s;  int i=0;  printf("Enter r for Rock.\nEnter p for Paper.\nEnter s for Scissor.");  do  {  printf("\nEnter your Move->");  fflush(stdin);  scanf("%c",&s);  if(s=='r')  {  printf("\nYou selected  Rock.\nComputer selects Rock");  }  else if(s=='p')  {  printf("\nYou selected Paper.\nComputer selects Paper");  }  else if(s=='s')  {  printf("\nYou selected Scissor.\nComputer selects Rock.\n--------YOU LOST THE GAME-------");  i=1;  }  else  {  printf("\nInformation incorrect");  }  }while(i==0);  return 0;  } |
| Output | Text  Description automatically generated |

CREATED BY:- PRUTHURAJ SUTHAR (20CS092)