***Q1. Write a program in a function named q1, to check whether a given number is prime or not. Take an integer input from the user and use the function to determine if it's prime.***

|  |
| --- |
| void q1()  {       int n, i, m=0, flag=0;       cout << "Enter the Number to check Prime: ";  cin >> n;  m=n/2;  for(i = 2; i <= m; i++)  {   if(n % i == 0)   {        cout<<"Number is not Prime."<<endl;        flag=1;       break;       }      }    if (flag==0)        cout << "Number is Prime."<<endl;    } |

***Q2. Write a program in a function named q2, that defines a function to swap the values of two integer variables. Prompt the user for two integers, call the function to swap them, and then display the swapped values.***

|  |
| --- |
| void q2()  {  int a = 5, b = 10, temp;  cout << "Before swapping." << endl;  cout << "a = " << a << ", b = " << b << endl;  temp = a;  a = b;  b = temp;  cout << "\nAfter swapping." << endl;  cout << "a = " << a << ", b = " << b << endl;  } |

***Q3. Write a program in a function named q3, to take a value from the user as input the angles of a triangle and check whether the triangle is valid or not, by using the if-else statement.***

|  |
| --- |
| Void q3()  {  int angle1, angle2, angle3, sum;         cout<<"Enter three angles of triangle: \n”;     cin>>angle1>>angle2>>angle3;       sum = angle1 + angle2 + angle3;          if (sum == 180 && angle1 > 0 && angle2 > 0 && angle3 > 0)      {          Cout<<"Triangle is valid.\n";      }      else      {          Cout<<"Triangle is not valid.\n";      }    } |

***Q4.*** ***Write a program in a function named q4, that asks the user to enter a day of the week (1-7) and then displays the corresponding day name (e.g., 1 for Sunday, 2 for Monday) using a switch-case statement.***

|  |
| --- |
| Void q4()  {  int day;  cout << "Enter the day value: " << endl;  cin >> day;  switch (day)  {  case 1:  cout << "Monday" << endl;  break;  case 2:  cout << "Tuesday" << endl;  break;  case 3:  cout << "Wednesday" << endl;  break;  case 4:  cout << "Thursday" << endl;  break;  case 5:  cout << "Friday" << endl;  break;  case 6:  cout << "Saturday" << endl;  break;  case 7:  cout << "Sunday" << endl;  break;  default:  cout << "Please enter a valid input!!" << endl;  }  } |

***Q5. Write a program in a function named q5, to check whether a year is a leap year or not.***

|  |
| --- |
| Void q5()  {     int year;  cout<<”enter year:”<<endl;  cin>>year;     if (((year % 4 == 0) && (year % 100 != 0)) || (year % 400 == 0))      cout<<year<<" is a leap year";     else      cout<<year<<" is not a leap year";  } |