**CHAROTAR UNIVERSITY OF SCIENCE & TECHNOLOGY**

**DEVANG PATEL INSTITUTE OF ADVANCE TECHNOLOGY & RESEARCH**

Department of Computer Engineering/Computer Science & Engineering/ Information Technology

**Subject Name: Object Oriented Programming with C++**

**Semester: II**

**Subject Code: CE144**

**Academic year: 2020-21**

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| **No.** | **Aim of the Practical** |
| **38.** | **Create an Abstract class vehicle having average as data and pure virtual function getdata() and putdata(). Derive class car and truck from class vehicle having data members: fuel type (petrol, diesel, CNG) and no of wheels respectively. Write a main ( ) that enters the data of two cars and a truck and display the details of them. Use the concept of Abstract Base class and Pure Virtual functions.**  **PROGRAM CODE :**  #include <iostream>  using namespace std;  class vehicle  {  public:  float average;  virtual void getdata() = 0;  virtual void putdata() = 0;  };  class car : public vehicle  {  public:  string fuel\_type;  int nowheel;  void getdata()  {  cout << "Enter the type of fuel used in your car (Petrol, Diesel, CNG): ";  cin >> fuel\_type;  cout << "Enter the number of wheels: ";  cin >> nowheel;  }  void putdata()  {  cout << "fuel type is: " << fuel\_type << endl;  cout << "Number of Wheels: " << nowheel << endl;  cout << endl;  }  };  class truck : public vehicle  {  public:  string fuel;  int wheel;  void getdata()  {  cout << "Enter the type of fuel used in your truck (Petrol, Diesel, CNG): ";  cin >> fuel;  cout << "Enter the number of wheels: ";  cin >> wheel;  cout << endl;  }  void putdata()  {  cout << "fuel type is: " << fuel << endl;  cout << "Number of Wheels: " << wheel << endl;  cout << endl;  }  };  main()  {  car c1, c2;  truck t;  c1.getdata();  c2.getdata();  t.getdata();  cout << "Details of car-1" << endl;  c1.putdata();  cout << "Details of car-2" << endl;  c2.putdata();  cout << "Details of truck" << endl;  t.putdata();  }  **OUTPUT:**    **CONCLUSION:** In this practical learn the concept of Abstract Base class and Pure Virtual functions and how to implement it. |