**OOP With C++ EXERCISES**

**1.** Write a C++ program to implement a class called Circle that has private member variables for radius. Include member functions to calculate the circle's area and circumference.

**2.** Write a C++ program to create a class called Rectangle that has private member variables for length and width. Implement member functions to calculate the rectangle's area and perimeter.

**3.** Write a C++ program to create a class called Person that has priv

ate member variables for name, age and country. Implement member functions to set and get the values of these variables.

**4.** Write a C++ program to create a class called Car that has private member variables for company, model, and year. Implement member functions to get and set these variables.

**5.** Write a C++ program to implement a class called BankAccount that has private member variables for account number and balance. Include member functions to deposit and withdraw money from the account.

**6.** Write a C++ program to create a class called Triangle that has private member variables for the lengths of its three sides. Implement member functions to determine if the triangle is equilateral, isosceles, or scalene.

**7.** Write a C++ program to implement a class called Employee that has private member variables for name, employee ID, and salary. Include member functions to calculate and set salary based on employee performance.

**8.** Write a C++ program to implement a class called Date that has private member variables for day, month, and year. Include member functions to set and get these variables, as well as to validate if the date is valid.

**9.** Write a C++ program to implement a class called Student that has private member variables for name, class, roll number, and marks. Include member functions to calculate the grade based on the marks and display the student's information.

10. The ZooAnimal class definition below is missing a prototype or a function declaration for the Create function. It should have parameters so that a character string and three integer values (in that order) can be provided when

it is called for a ZooAnimal object. Like the Destroy function, it

should have return type void. Write an appropriate prototype for the

ZooAnimal Create function.

class ZooAnimal

{

private:

char \*name;

int cageNumber;

int weightDate;

int weight;

public:

void Destroy (); // destroy function

char\* reptName ();

int daysSinceLastWeighed (int today);

};

11.