

VIT - Vellore

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BCSE102P_Structured and Object Oriented Programming Lab_VL2024250502365

VIT V_Structured and OOP_Lab 5_COD_Medium_Constructors Destructors

Attempt : 1

Total Mark : 10

Marks Obtained : 10

Section 1 : Coding

1. Problem Statement

Rathi wants to determine whether a given string is a palindrome or not. To assist her, you are tasked with creating a program that checks if a string is a palindrome.

You are required to define a PalindromeChecker class with the following properties and methods:

A constructor that initializes the object with a string. A method named isPalindrome that checks if the input string is a palindrome. A destructor that displays a message when an object is destroyed.

Answer

```

// You are using GCC
#include<iostream>
#include<algorithm>
using namespace std;

class PallindromeChecker{
private:
    string str;
public:
    PallindromeChecker(string a){
        str = a;
    }
    bool isPallindrome(){
        string temp = str;
        reverse(temp.begin(),temp.end());
        return temp == str;
    }

    ~PallindromeChecker(){
        cout<<"Destructor called. Object destroyed.";
    }
};

int main()
{
    string input;
    cin>>input;

    PallindromeChecker check(input);

    if(check.isPallindrome()){
        cout<<"The input string is a palindrome."<<endl;
    }
    else{
        cout<<"The input string is not a palindrome."<<endl;
    }
    return 0;
}

```

Status : Correct

Marks : 10/10