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[🏠 HOME](#)[Home](#) » [My courses](#) » [SCSJ1023-11](#) » » [Tutorial 1: Procedural Programming vs Object-Orien...](#)

Tutorial 1: Procedural Programming vs Object-Oriented Programming

This exercise is meant to show the basic difference between procedural programming and object-oriented programming. Creating several programs according to the requirement given below:

Program 1

a. Define a function to draw a circle with specified location (x,y), size (radius) and color

Function Prototype:

```
void drawCircle(int x, int y, int r, int color);
```

b. Test the function to draw several circles

c. Utilizing the function in (a), define another function which clear or undraw a circle from the screen.

Function Prototype:

```
void undrawCircle(int x, int y, int r);
```

Program 2

Modify Program 1 using a struct data type. In this program you need to define a struct to hold the information of a circle.

```
struct Circle{  
  
};
```

```
new function prototypes:  
void drawCircle(Circle c);  
void undrawCircle(Circle c);
```

Program 3

Modify Program 2 using OOP approach. In this program you need to define a class to for the circle.

```
class Circle{  
    public:  
        int x, y, r, color;  
        void draw();  
        void undraw();  
};
```



Grading summary

| | |
|---------------|---|
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 Course Learning Outcome Survey (Exit Survey)


 SCSJ1023-Course Outline

 Results























 Lecture Slides




















 Materials

 Vote your answer (for Active Learning Activities)

 PT1 skill testing and Revision Exercise

 **Tutorial 1: Procedural Programming vs Object-Orien...**

-  Tutorial 2(a): Arrays of objects
-  Tutorial 3: String Manipulations
-  Tutorial 4(a): File operations - Revision
-  Tutorial 5: Inheritance, aggregation and composition
-  Tutorial 6: Polymorphisms
-  Tutorial 7: Polymorphisms and Dynamic Allocated Ob...
-  Reflection on SBT2
-  Tutorial 8: Function and Class Templates
-  Tutorial 9: Missed Topics
-  Lab 1: Introduction to classes and objects (2.5%)
-  Lab 2: Aggregations and Compositions
-  Lab 2 Solutions (Problem 1) - Update Nov 15
-  Lab 2 Solutions (Problem 2)
-  Lab 4 Solution (Polymorphism)
-  Tutorial 7 Solution (Polymorphism and Dynamic Allo...
-  Lab 3: Compositions
-  Lab 4: Polymorphisms
-  Revision Exercise
-  Tutorial 4(b): Binary Files
-  Exercise: Class and Object Manipulation
-  Preparation Exercise - Mid Term (Programming Part)
-  Exercise: Inheritance and Polymorphism

-  Skill-Based Test 1
-  Skill-Based Test 2
-  Final Exam Paper 2
-  Group Project and Team working Assessment Criteria
-  Examples of Past Projects
-  Library for testing intersection /collision betwe...
-  Example of how to separate your project into sever...
-  Assignment 1 : Aggregations and Compositions
-  Assignment 2 : Inheritance and Polymorphism
-  Peer and Self Assessment 1
-  Peer and Self Assessment 2
-  Peer and Self Assessment 3
-  Group Project Submission
-  Skill-Based Tests
-  Mid Term Tests
-  Final Exams
-  DevCPP Installer
-  Dev C++ Installer
-  WinBGLm: Graphic library

SCSJ1023-12

Assignment administration

- Edit settings
- Group overrides
- User overrides
- Locally assigned roles
- Permissions
- Check permissions
- Filters
- Logs
- Backup
- Restore
- Advanced grading
- View gradebook
- View all submissions
- Download all submissions

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