OOC Preperation Quiz for Mid Term 2018

Total points   17/50

Please try to attempt the Quiz after preparing for the exam. Questions include on Theory and Coding.

Please note that the purpose of the Quiz is to check your knowledge and perhaps allow you to learn additional things and not to give marks.

Almost all the questions in this quiz have multiple correct answers.

Your actual mid term will have questions with typically a single correct answer per question.

✕   **Select Correct statements only**   0/3

☐ All properties should be private

☐ All methods should be public

☑ Some methods can be private   ✓

☑ A class can have many objects   ✓

☐ First you create objects in C++ then you write the code for the Class

☐ Classes are only specifications

☑ Each object can have different values for their properties   ✓

☐ We cannot directly access a property of an object in the main function

Correct answer

☑ All properties should be private

☑ Some methods can be private

☑ A class can have many objects

☑ Classes are only specifications

☑ Each object can have different values for their properties

☑ We cannot directly access a property of an object in the main function

✕ Key Object Oriented Concepts   0/3

☐ Properties

☑ Encapsulation   ✓

☑ Polymorphism   ✓

☐ structured programming

☑ Inheritance   ✓

☐ Member Hiding

☐ Information Hiding

Correct answer

☑ Encapsulation

☑ Polymorphism

☑ Inheritance

☑ Information Hiding

✓ Similar words for methods in a class   3/3

☑ functions   ✓

☐ attributes

☐ state

☑ member functions   ✓

☐ function members

☐ properties

☑ behaviour   ✓

✓ **Select the correct statement**   3/3

☑ cout can be used to print values   ✓

☑ cin can be used to input values   ✓

☑ std is the namespace that is defined in iostream header files   ✓

☑ C++ requires that the main function's return type is int   ✓

☑ One of the main difference between cout and printf is that you don't need to specify format specifiers in cout   ✓

✓ **Abstraction allows you to**   3/3

☐ Have methods and properties together

☑ Identify Classes from a group of objects   ✓

☐ Do Inheritance

☑ Leave out unnecessary details of a class for the problem we are solving ✓

☐ Select the best cat as a pet

✗ Parameters in a Method can be   0/3

☑ value type parameters   ✓

☑ normal parameters   ✗

☑ no parameters   ✗

☑ reference type parameters   types of Method Parameters: ✓
                                     Named Parameters.
☐ pointer type parameters   Ref Parameters.
                                     Out Parameters.
Correct answer   Default or Optional Parameters.
                                     Dynamic Parameters.
☑ value type parameters   Value Parameters.
                                     Params.
☑ reference type parameters

☑ pointer type parameters

✗ Information Hiding   0/3

☑ Allows you to hide implementation details of a class   ✓

☐ Handle security to prevent hacking

☑ Is implemented through private and public keywords in C++   ✓

☐ Is related to encapsulation

☐ is related to grouping objects together

☑ is related to abstraction   ✗

Correct answer

☑ Allows you to hide implementation details of a class

☑ Is implemented through private and public keywords in C++

☑ Is related to encapsulation

✕ What is true about this method which is represented in UML notation   0/3

$+ getStudentID() : int$

☑ This contains an error int needs to come to the front   ✕

☑ This is a valid getter of the studentID property   ✓

☑ The method is a public method   ✓

☐ This method can be implemented as void getStudentID() : int

☑ This method can be implemented as int getStudentID()   ✓

Correct answer

☑ This is a valid getter of the studentID property

☑ The method is a public method

☑ This method can be implemented as int getStudentID()

✕ Encapsulation Allows you to   0/3

☑ Group methods and properties together   ✓

☑ Identify Classes from a group of objects   ✕

☑ Hide Implementation details of a class though the use of public methods   ✓

☐ Do Inheritance

Correct answer

☑ Group methods and properties together

☑ Hide Implementation details of a class though the use of public methods

✕   What is true about this UML Book Class   0/3

```
        Book
- bookID : int
- title : String
+ assignBook ( bookID : int, title : String) : void
+ display () : void
```

☑ The minus sign and + sign for private and public respectively   ✓

☑ bookID is private property of the type integer   ✓

☐ The datatype of title in C++ should be a char array

☐ The display() method is a private method

☑ The assignBook() method is incorrect since the parameters have the same   ✕
  names as the attributes

☑ Both assignBook() and display() are void methods   ✓

☑ The name of the class is called Book   ✓

Correct answer

☑ The minus sign and + sign for private and public respectively

☑ bookID is private property of the type integer

☑ The datatype of title in C++ should be a char array

☑ Both assignBook() and display() are void methods

☑ The name of the class is called Book

✓ **What is true about this method which is represented in UML notation**   2/2

$+ setStudentID (no : int) : void$

☐ This contains an error since you cannot have a void method

☑ setStudentID is a valid setter for the studentID property   ✓

☑ This method can be implemented as void setStudentID(int no);   ✓

☐ This method can be implemented as void setStudentID(no int)

☐ This method is a private method

✓   3/3
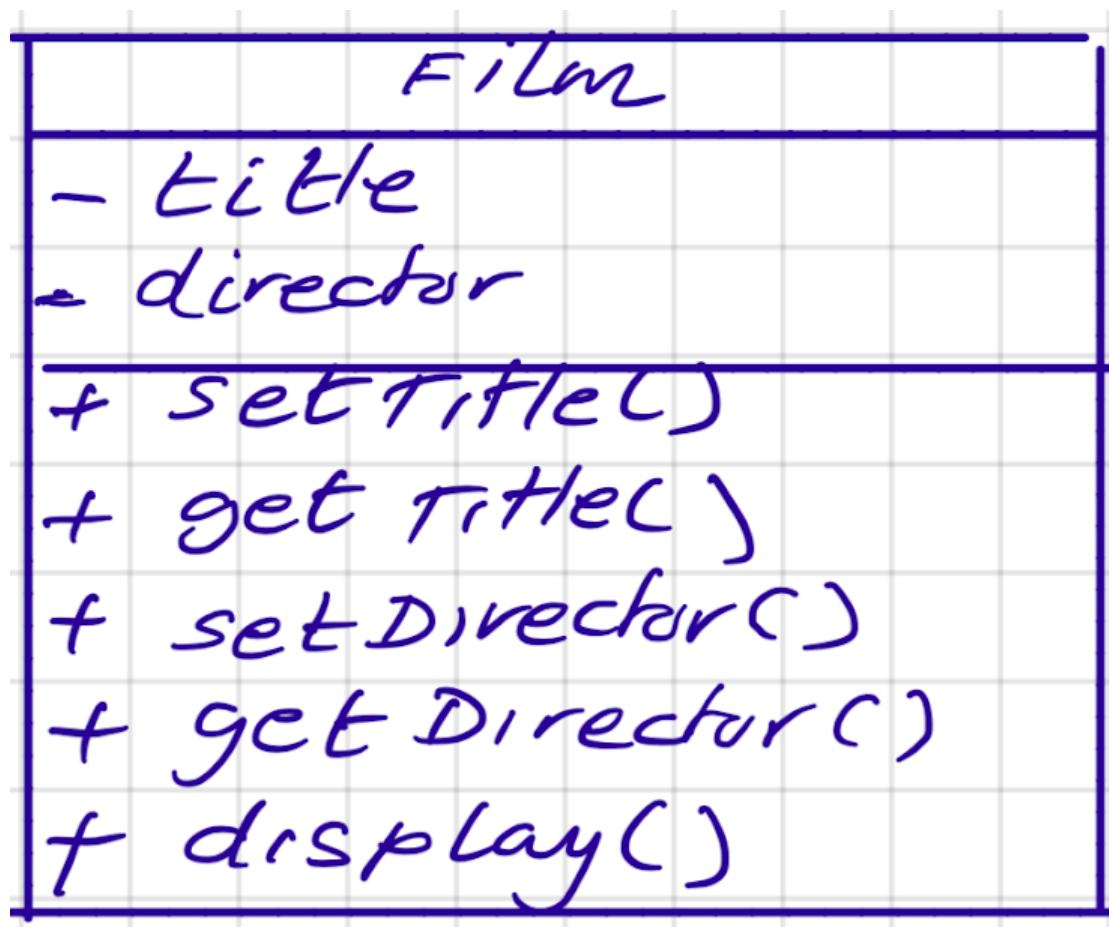
$+ salary : double$

☐ This is a valid property according to object oriented principles

☑ The datatype of salary is double   ✓

☑ The property salary is defined as public   ✓

☐ This can be implemented in C++ as int salary

☐ This can be implemented in C++ as salary : double

✕   What is true about this UML class diagram and Object Orientation in   0/3
general

Film
— title
— director
+ setTitle()
+ get Title()
+ setDirector()
+ get Director()
+ display()

☑ This is an invalid UML Class diagram   ✕

☑ The properties of this class are title and director   ✓

☑ The setTitle() and setDirector() methods are of the return type void   ✓

☑ The getTitle() and getDirector() methods are examples of getters   ✓

☑ When we think about implementation the display() method is a public method   ✓
and doesn't return a value

☑ The name of class is Film   ✓

☑ The setDirector() method can be implemented as void setDirector()   ✕

☑ You cannot call the properties title and director directly from the main function ✓

Correct answer

☑ The properties of this class are title and director

☑ The setTitle() and setDirector() methods are of the return type void

☑ The getTitle() and getDirector() methods are examples of getters

☑ When we think about implementation the display() method is a public method and doesn't return a value

☑ The name of class is Film

☑ You cannot call the properties title and director directly from the main function

✗ Identify the errors in this code   0/3

```
3   class Student {
4       private;
5           int studentNo;
6           int marks1;
7           int marks2;
8           int marks3;
9       public:
10          float average;
11          void setStudentNo(int no);
12          void assignMarks(int mrk1, int mrk2, int mrk3);
13          float calcAvg();
14   }
15
16   void setStudentNo(int no) {
17       studentNo = no;
18   }
```

☐ Line 3 should have a semi colan

☑ Line 4 should have a colan   ✓

☐ Line 11 should be Student::setStudentNo

☑ Line 16 should be Student::setStudentNo   ✓

☐ Line 10 average needs to be defined in the private section

☑ There should be a semi colan after line 14   ✓

☐ There should be a semi colan after line 18

Correct answer

☑ Line 4 should have a colan

☑ Line 16 should be Student::setStudentNo

☑ Line 10 average needs to be defined in the private section

☑ There should be a semi colan after line 14

✓ What is the output of the program given   3/3

```
1  #include <iostream>
2  using namespace std;
3
4  int main() {
5      cout << "Hellow" << "SLIIT"
6            << endl << "OOC";
7  }
```


○ Option 1

○ Option 2

○ Option 3

◉ Option 4   ✓

✕ Identify errors in this code   0/3

```
 3   class XYZ {
 4       private:
 5            int no;
 6            int key;
 7            void calcKey();
 8       public:
 9            void assignValues(int no);
10            void display();
11   }
```

☐ You can't have a class name like XYZ

☐ Line 7 calcKey() should be defined under public

☐ Line 9 There cannot be a method called assignValues()

☑ You need to have a colan after line 11   ✕

☑ There are other errors   ✓

Correct answer

☑ There are other errors

✕ **Similar words for properties of a class**   0/3

☑ data members   ✓

☐ member data

☐ state

☑ attributes   ✓

☐ methods

☐ behaviour

Correct answer

☑ data members

☑ state

☑ attributes

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