NATIONAL OPEN UNIVERSITY OF NIGERIA
PLOT 91, CADASTRAL ZONE, NNAMDI AZIKIWE EXPRESSWAY, JABI-ABUJA
FACULTY OF COMPUTING
DEPARTMENT OF COMPUTER SCIENCE
2025_2 EXAMINATIONS

COURSE CODE: CIT834
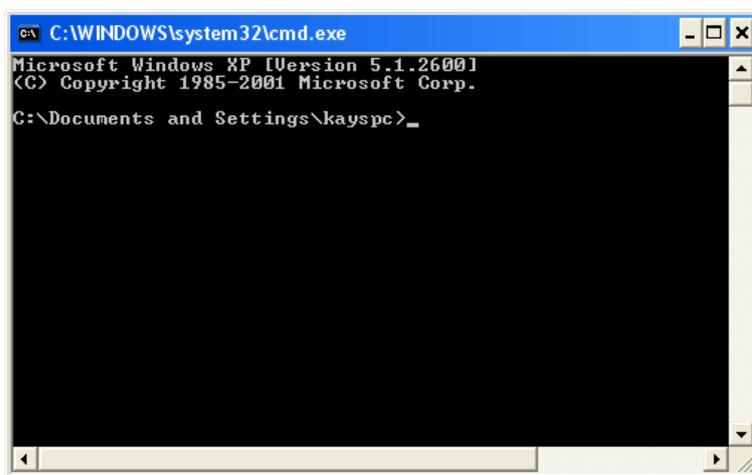
COURSE TITLE: OBJECT-ORIENTED PROGRAMMING USING C#

COURSE CREDIT: 3 UNITS

TIME ALLOWED: 3 HOURS

INSTRUCTION: ANSWER QUESTION 1 AND ANY OTHER THREE(3) QUESTIONS

Question 1:

With reference to the figure below, provide answers to the following questions:

1a. Give any two (2) reasons why this application is considered suitable for learning object-oriented programming using the C# and utility programs?   [5 marks]

1b. State the procedure involved in creating a new Console Application project. [5 marks]

1c. State five characteristics of object-oriented programming.   [5 marks]

1d. Write a simple code to outline the procedure for using a static property. [5 marks]

1e. With the use of a simple code describe a simple procedure for demonstrating inheritance

[5 marks]

Question 2:

Go through the source code below carefully, before answering the questions 2a. and 2b:

```csharp
using System;
using System.Collections.Generic;
using System.ComponentModel;
using System.Data;
using System.Drawing;
using System.Text;
using System.Windows.Forms;

namespace String_Variables
{
    public partial class Form1 : Form
    {
        public Form1()
        {
            InitializeComponent();
        }

        private void btnStrings_Click(object sender, EventArgs e)
        {

        }
    }
}
```

2a.   Give a brief explanation of how the code for the Method can be concealed. [10 marks]
2b.   If an error were to be introduced into the source code, which method would you adopt
      to fix it? [5 marks]

Question 3:
3a. What are the seven (7) properties of static constructors?   [7 marks]
3b. Write a brief note on "Default Constructor" and "Garbage Collection" [4 marks]
3c. Write a simple program that displays "Hello World"   (4 marks)

Question 4:
4a. Briefly explain the concept of polymorphism in relation to inheritance in object-oriented programming
[10 marks]
4b. Give a brief description of method overloading   (5 marks)

Question 5:
5a. Give a brief definition of the following terms:
    i.   Keyword [5 marks]
    ii.   Namespace [5 marks]
5b. What are type modifiers in C# and give 4 example of type modifiers? [5 marks]

Question 6:
Briefly state and explain the factors that determine the type of setup Instruction used for C#
Development [15 marks]