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HONG KONG INSTITUTE OF VOCATIONAL EDUCATION**Lab 10 : JNI A**

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**Module Intended Learning Outcome (#1):**

On completion of the module, students are expected to be able to:

- Develop Java application to reuse the old native system functions.

**Lesson Intended Learning Outcome:**

On completion of this workshop, students are expected to be able to:

- Build, run, and modify a Java application to call a C program using JNI.

**Task A**

Step 1: Open Notepad++ and select File -> New.

Step 2 : Create and Write the C Program, gotoxy.c which can set the position of cursor on the console and display the text in Microsoft Windows command prompt.

Sample Code for your reference :

```
// gotoxy.c
#include <stdio.h>
#include <stdlib.h>
#include <windows.h>

void gotoxy(int x, int y) {
    COORD coord;
    coord.X = x;
    coord.Y = y;
    SetConsoleCursorPosition(GetStdHandle(STD_OUTPUT_HANDLE), coord);
}

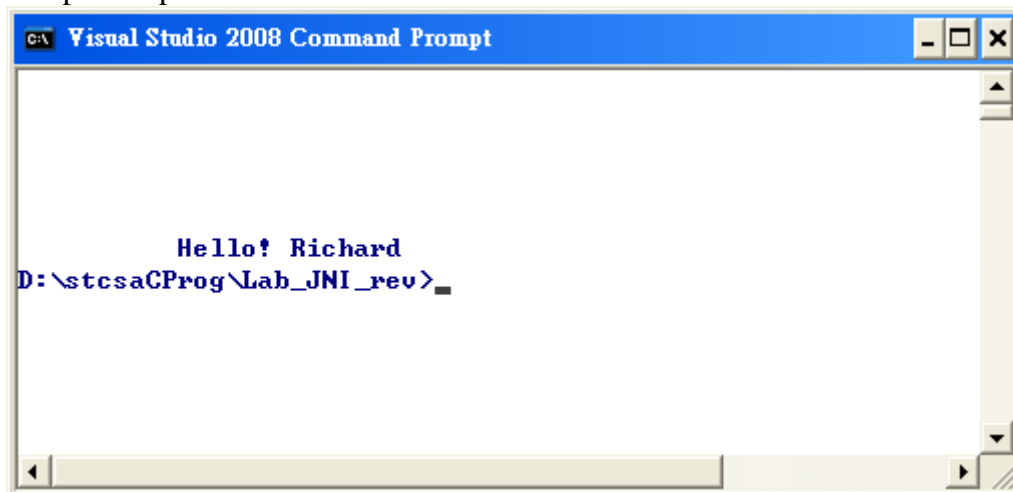
int main() {
    system("cls"); // clear the screen
    gotoxy(2, 10); // set position of cursor to (2, 10)
    printf("Hello from Visual C!");
}
```

Step 3 : Develop a Java Application – JNA1\_Name.java which can let user input the coordination (x is column, y is row) of a console and a name for greeting. Your java application will clear screen and then show a greeting message on the specified location on the console.

Sample Input :

```
Input the position of column: 10
Input the position of row: 5
Say Hello to: Richard
```

Sample Output :

A screenshot of a Windows Command Prompt window titled "Visual Studio 2008 Command Prompt". The window has a blue title bar and standard Windows window controls (minimize, maximize, close). The main area is white and contains the text "Hello! Richard" in blue. Below this, the command prompt shows the directory "D:\stcsaCProg\Lab\_JNI\_rev" followed by a greater-than sign and a cursor. The window has a scroll bar on the right and a status bar at the bottom.

Step 7: Demonstrate your program to the lecturer and submit your zipped project file to Moodle.