

Pradip Lamsal

R11484918

Lab 2

The screenshot displays the Microsoft Visual Studio Express 2012 for Windows Desktop interface. The main window shows a C++ file named `pradip_lamsal_lab_session_3.cpp` with the following code:

```
1 #include <stdio.h>
2
3 int factorial(int);
4 int binarySearchIterative(int [], int);
5 int binarySearchRecursive(int A[], int v, int high, int low);
6 void mergeSort(int[], int);
7
8 int main() {
9     int N, a=10;
10    int A[] = {2, 4, 7, 9, 12, 52};
11    printf("%d", factorial(a));
12    printf("\n");
13    printf("%d\n", binarySearchIterative(A,4));
14    printf("%d\n", binarySearchRecursive(A,4,5,0));
15    printf("%d\n", mergeSort(A, 5));
16    return 0;
17 }
18
19 int factorial(int a) {
20     if (a==1 || a==0) return 1;
21     return (a * factorial(a-1));
22 }
23
24 int binarySearchIterative(int A[], int v) {
25     int low = 0, high = 5;
26     while (low<=high) {
27         int mid = (low + high)/2;
28         if (A[mid] == v) return mid;
29         else if (A[mid] >= v) high = mid - 1;
30         else low = mid + 1;
```

The Solution Explorer on the right shows the project structure for `ConsoleApplication3`, including `External Dependencies`, `Header Files`, `Resource Files`, and `Source Files`. The `Source Files` folder contains the file `pradip_lamsal_lab_session_3.cpp`. The Properties window is also visible but empty.

The status bar at the bottom indicates the current line is 3, column 1, character 1. The system clock shows 11:48 PM on 7/14/2017.

```

31     }
32 }
33
34 int binarySearchRecursive(int A[], int v, int high, int low) {
35     if (high < low) return low;
36     int mid = (high + low) / 2;
37     if (A[mid] >= v) return binarySearchRecursive(A, v, low, mid - 1);
38     else return binarySearchRecursive(A, v, mid + 1, high);
39 }

```



