# Sessi 06:4

### PSP0 Project Plan Summary

| Name:       | James Small    |               |
|-------------|----------------|---------------|
| Program:    | 1B             | Number: 1     |
| Instructor: | Dr. Concepcion | Language: C++ |

| Гіme in Phase (min.) | Plan | Actual | To Date | To Date % |
|----------------------|------|--------|---------|-----------|
| Planning             |      | 7      | 7       | 13        |
| Design               |      | 7      | 7       | 13        |
| Code                 |      | 12     | 12      | 22.2      |
| Compile              |      | 9      | 9       | 16.7      |
| Test                 |      | 14     | 14      | 25.9      |
| Postmortem           |      | 5      | 5       | 9.3       |
| Total                | 80   | 54     | 54      | 100       |
| Defects Injected     |      | Actual | To Doto | To Date # |
| Defects Injected     |      | Actual | To Date | To Date % |
| Planning             |      | 0      | 0       | 0         |
| Design               |      | 1      | 1       | 33.3      |
| Code                 |      | 2      | 2       | 66.7      |
| Compile              |      | 0      | 0       | 0         |
| Test                 |      | 0      | 0       | 0         |
| Total Development    |      | 3      | 3       | 100       |
| Defects Removed      |      | Actual | To Date | To Date % |
| Planning             |      | 0      | 0       | 0         |

| Defects Removed   | Actual | To Date | To Date % |
|-------------------|--------|---------|-----------|
| Planning          | 0      | 0       | 0         |
| Design            | 0      | 0       | 0         |
| Code              | 0      | 0       | 0         |
| Compile           | 2      | 2       | 66.7      |
| Test              | 1      | 1       | 33.3      |
| Total Development | 3      | 3       | 100       |
| After Development |        |         |           |

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### Time Recording Log

| Name:       | James Small    |           |     |
|-------------|----------------|-----------|-----|
| Program:    | 1B             | Number:   | 1   |
| Instructor: | Dr. Concepcion | Language: | C++ |

| Date           | Start | Stop  | Int.<br>Time | Delta<br>Time | Phase      | Comments   |
|----------------|-------|-------|--------------|---------------|------------|--|
| 2014-01-<br>16 | 18:08 | 18:15 | 0            | 7             | Planning   | Read Prompt and setup program 1b in moops                      |
| 2014-01-<br>16 | 18:15 | 18:22 | 0            | 7             | Design     | made initial design on paper                                   |
| 2014-01-<br>19 | 17:05 | 17:17 | 0            | 12            | Code       | wrote the code in C++  |
| 2014-01-<br>19 | 17:18 | 17:27 | 0            | 9             | Compile    | Compiled and fixed compilation bugs                            |
| 2014-01-<br>19 | 17:28 | 17:45 | 3            | 14            | Test       | Confirmed it worked according to the specs, break for bathroom |
| 2014-01-<br>19 | 17:46 | 17:51 | 0            | 5             | Postmortem | Filled out form and took screenshots of working code           |
|                |       |       |              |               |            |  |
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Total: 54

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### Defect Recording Log

| Name: James Sn        | nall                       |                          |                      |            |   |          |
|-----------------------|----------------------------|--------------------------|----------------------|------------|---|----------|
| Program: 1B           |                            | Num                      | Number: 1            |            |   |          |
| Instructor: Dr. Conce | epcion                     |                          |                      | <br>Lang   | uage: C++                               |          |
|                       |                            |                          |                      |            |   |          |
| Date                  | Number                     | Туре                     | Inject               | Remove     | Fix Time                                | Fix Ref. |
| 2014-01-19            | 1                          | 20 - Syntax              | Code                 | Compile    | 1                                       |          |
| Description           | : Forgot ; after a line of | of code                  |                      |            | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | JL       |
|                       |                            |                          |                      |            |   |          |
| Date                  | Number                     | Type                     | Inject               | Remove     | Fix Time                                | Fix Ref. |
| 2014-01-19            | 2                          | 20 - Syntax              | Code                 | Compile    | 1                                       |          |
| Description           | Forgot to import fstre     | eam library              |                      |            |   |          |
|                       |                            |                          |                      |            |   |          |
| Date                  | Number                     | Туре                     | Inject               | Remove     | Fix Time                                | Fix Ref. |
| 2014-01-19            | J                          | 10 - Documentation       | /                    | Test       | 5                                       |          |
| Description           | : Last number was dup      | olicated on read in, pro | oblem was with outpu | it method. |   |          |
|                       |                            |                          |                      |            |   |          |
| Date                  | Number                     | Туре                     | Inject               | Remove     | Fix Time                                | Fix Ref. |
|                       |                            |                          |                      |            | <u> </u>                                |          |
| Description           |                            |                          |                      |            |   |          |
|                       |                            |                          |                      |            |   |          |
| Date                  | Number                     | Туре                     | Inject               | Remove     | Fix Time                                | Fix Ref. |
|                       |                            |                          |                      | J          |   |          |
| Description           |                            |                          |                      |            |   |          |
|                       |                            |                          |                      |            |   |          |
| Date                  | Number                     | Туре                     | Inject               | Remove     | Fix Time                                | Fix Ref. |
|                       | ]                          |                          |                      |            |   | <u> </u> |
| Description:          |                            |                          |                      |            |   |          |
|                       |                            |                          |                      |            |   |          |
| Date                  | Number                     | Туре                     | Inject               | Remove     | Fix Time                                | Fix Ref. |
|                       |                            |                          |                      | ]          |   |          |
| Description           |                            |                          |                      |            |   |          |
|                       |                            |                          |                      |            |   |          |

```
// James Small
// Program 1B
// Software Engineering
#include <iostream>
#include <fstream>
#include <string>
using namespace std;
int menu()
    int choice = 0;
    cout << "What would you like to do?\n";</pre>
    cout << "Enter 1 to read from file.\n";</pre>
    cout << "Enter 2 to write to file.\n";</pre>
    cout << "Enter 0 to quit.\n";</pre>
    cout << "Choice: ";</pre>
    cin >> choice;
    return choice;
}
string fileName()
    string file;
    cout << "Enter the file name to access: ";</pre>
    cin >> file;
    return file;
}
void readFromFile(string fileName)
{
    ifstream infile;
    infile.open(fileName.c str());
    float currentValue = 0;
    while (!infile.eof()) {
         infile >> currentValue;
         cout << currentValue << endl;</pre>
    infile.close();
}
void writeToFile(string fileName)
```

```
int count = 0;
    float currentValue;
    cout << "Enter the amount of numbers to write: ";</pre>
    cin >> count;
    ofstream outfile;
    outfile.open(fileName.c str());
    for (int i = 0; i < count; i++) {
        cout << "Enter number " << i + 1 << ": ";</pre>
        cin >> currentValue;
        if (i == count - 1)
            outfile << currentValue;</pre>
        else
            outfile << currentValue << " ";</pre>
    }
    outfile.close();
int main()
    string file;
    int menuChoice = menu();
    if (menuChoice != 0) {
        file = fileName();
        if (menuChoice == 1)
            readFromFile(file);
        else if (menuChoice == 2)
            writeToFile(file);
    return 0;
```

# **Compilation Image**

```
jamess-imac:Program1B AcousticTime$
g++ -o program1b program1b.cpp
jamess-imac:Program1B AcousticTime$
```

## **Write Image**

# Read Image

```
jamess-imac:Program1B AcousticTime$ ./program1b
                                                jamess-imac:Program1B AcousticTime$ ./program1b
What would you like to do?
                                                What would you like to do?
Enter 1 to read from file.
                                                Enter 1 to read from file.
Enter 2 to write to file.
                                                Enter 2 to write to file.
Enter 0 to quit.
                                                Enter 0 to quit.
Choice: 2
                                                Choice: 1
Enter the file name to access: testfile
                                                Enter the file name to access: testfile
Enter the amount of numbers to write: 10
                                                15
Enter number 1: 15.0
                                                69.9
Enter number 2: 69.9
Enter number 3: 6.5
                                                6.5
Enter number 4: 22.4
                                                22.4
Enter number 5: 28.4
                                                28.4
Enter number 6: 65.9
                                                65.9
Enter number 7: 19.4
                                                19.4
Enter number 8: 198.7
                                                198.7
Enter number 9: 38.8
                                                38.8
Enter number 10: 138.2
                                                138.2
jamess-imac:Program1B AcousticTime$ ∭
                                                jamess-imac:Program1B AcousticTime$
```

# **Design Methodology Diagram**

### **Main Function**

call menu() function
call filename() function
call read() or write() function based on menu choice

# **Menu Function**

display menu, return choice

## **FileName Function**

ask user for file name, return choice

### read Function

read selected file and display numbers

### write Function

ask user for amount of numbers allow user to enter numbers and output to file