

## Quiz 1 Solutions (Scroll to see all solutions!)

(Worth ONLY 10 points!!! Don't panic!! It is just to get you used to working on problems and how I ask problems!!! – and, trust me. There will be many many opportunities to make up these 10 points this semester EVEN IF YOU GET NOTHING RIGHT ON THIS QUIZ!!! Did I mention Don't Panic?? – also note that there's an extra credit point already built into the quiz!!!)

```

/*****
/* Problem 1: 1 pt)
/* given the following code, what is printed out in func1?
*/

void func1(string s,int x);

int main() {
    /* Problem 1 (calls func1, below main): */
    string s1 = {"boiwthauoighid"};
    int len1 = 14;
    func1(s1,len1); // func1 prints _____goat_____
    return 0;
}

/*****
void func1(string s, int x) {
    for (int i = x-4; i > 3; i-=2) {
        cout << s[i];
    }
    cout << endl; // just adds a new blank line
}

/*****
/* Problem 2: 1 pt)
/* given the following code, what is printed out in func2?
*/

void func2(string arr[],int len);

int main() {
    /* Problem 2 (calls func2, below main): */
    string arr[] = {"house", "piglet", "recoup", "glitter", "math"};
    func2(arr,5); // func2 prints _____sloth_____
    return 0;
}

void func2(string arr[],int len) {
    for (int i = 0; i < len; i++) {
        cout << arr[i][3];
    }
    cout << endl; // just adds a new blank line;
}

```

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```

/*****
/* Problem 3: 2pt)
/* given the following code, what is returned and printed out?

int func3(int a, int b);

int main() {
    /*Problem 3 (calls func3, below main): */
    int k = 28;
    int j = 16;
    int m = func3(k,j);
    cout << m << endl; // prints _____4_____
    return 0;
}

int func3(int x, int y) {
    while(x != y) {
        if(x > y) {
            x = x - y;
        }
        else {
            y = y - x;
        }
    }
    return x;
}

/*****
/* Problem 4: 2 pt
/* given the following code, what is printed out in func4?

void func4(int arr[], int len);

int main() {
    /*Problem 4 (calls func4, below): */
    int arr2[] = {4,8,2,5,1,3};
    int len2 = 6;
    func4(arr2,len2); // prints _____4 2 5 1 3 8_____
    return 0;
}

void func4(int arr[], int len) {
    for (int i =0;i<len-1;i++) {
        if (arr[i] > arr[i+1]) {
            int tmp = arr[i];
            arr[i] = arr[i+1];
            arr[i+1] = tmp;
        }
    }
    for (int i = 0; i < len; i++) {
        cout << arr[i];
    }
    cout << endl;
}

```

## Quiz 1 (vsu buttercups)

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```

/*****
/* Problem 1: 1 pt)
/* given the following code, what is printed out in func1?

void func1(string s,int x);

int main() {
    /* Problem 1 (calls func1, below main): */
    string s1 = {"boiwlhaueishid"};
    int len1 = 14;
    func1(s1,len1); // func1 prints _____seal_____
    return 0;
}

/*****
void func1(string s, int x) {
    for (int i = x-4; i > 3; i-=2) {
        cout << s[i];
    }
    cout << endl; // just adds a new blank line
}

/*****
/* Problem 2: 1 pt)
/* given the following code, what is printed out in func2?

void func2(string arr[],int len);

int main() {
    /* Problem 2 (calls func2, below main): */
    string arr[] = {"backs", "sharp","games","sleep","allot"};
    func2(arr,5); // func2 prints _____camel_____
    return 0;
}

void func2(string arr[],int len) {
    for (int i = 0; i < len; i++) {
        cout << arr[i][2];
    }
    cout << endl; // just adds a new blank line;
}

/*****

```

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/\* Problem 3: 2pt)

\*/

/\* given the following code, what is returned and printed out?

\*/

int func3(int a, int b);

int main() {

/\*Problem 3 (calls func3, below main): \*/

int k = 26;

int j = 12;

int m = func3(k,j);

cout &lt;&lt; m &lt;&lt; endl; // prints \_\_\_\_\_2\_\_\_\_\_

return 0;

}

int func3(int x, int y) {

while(x != y) {

if(x &gt; y) {

x = x - y;

}

else {

y = y - x;

}

}

return x;

}

/\*\*\*\*\*

/\* Problem 4: 2 pt

\*/

/\* given the following code, what is printed out in func4?

\*/

void func4(int arr[], int len);

int main() {

/\*Problem 4 (calls func4, below): \*/

int arr2[] = {3,7,1,4,0,2};

int len2 = 6;

func4(arr2,len2); // prints \_\_\_\_\_3 1 4 0 2 7\_\_\_\_\_

return 0;

}

void func4(int arr[], int len) {

for (int i =0;i&lt;len-1;i++) {

if (arr[i] &gt; arr[i+1]) {

int tmp = arr[i];

arr[i] = arr[i+1];

arr[i+1] = tmp;

}

}

for (int i = 0; i &lt; len; i++) {

cout &lt;&lt; arr[i];

}

cout &lt;&lt; endl;

}

## Quiz 1 (vs chrysanthemum)

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```

/*****
/* Problem 1: 1 pt)
/* given the following code, what is printed out in func1?

void func1(string s,int x);

int main() {
    /* Problem 1 (calls func1, below main): */
    string s1 = {"boiwhluoiwhid"};
    int len1 = 14;
    func1(s1,len1); // func1 prints _____wolf_____
    return 0;
}

/*****
void func1(string s, int x) {
    for (int i = x-4; i > 3; i-=2) {
        cout << s[i];
    }
    cout << endl; // just adds a new blank line
}

/*****
/* Problem 2: 1 pt)
/* given the following code, what is printed out in func2?

void func2(string arr[],int len);

int main() {
    /* Problem 2 (calls func2, below main): */
    string arr[] = {"bristle", "backs", "lemur","channel","dunkin"};
    func2(arr,5); // func2 prints _____skunk_____
    return 0;
}

void func2(string arr[],int len) {
    for (int i = 0; i < len; i++) {
        cout << arr[i][3];
    }
    cout << endl; // just adds a new blank line;
}

/*****

```

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/\* Problem 3: 2pt)

\*/

/\* given the following code, what is returned and printed out?

\*/

int func3(int a, int b);

int main() {

/\*Problem 3 (calls func3, below main): \*/

int k = 30;

int j = 9;

int m = func3(k,j);

cout &lt;&lt; m &lt;&lt; endl; // prints\_\_\_\_\_3\_\_\_\_\_

return 0;

}

int func3(int x, int y) {

while(x != y) {

if(x &gt; y) {

x = x - y;

}

else {

y = y - x;

}

}

return x;

}

/\*\*\*\*\*

/\* Problem 4: 2 pt

\*/

/\* given the following code, what is printed out in func4?

\*/

void func4(int arr[], int len);

int main() {

/\*Problem 4 (calls func4, below): \*/

int arr2[] = {5,9,3,6,0,4};

int len2 = 6;

func4(arr2,len2); // prints \_\_\_\_5 3 6 0 4 9\_\_\_\_\_

return 0;

}

void func4(int arr[], int len) {

for (int i =0;i&lt;len-1;i++) {

if (arr[i] &gt; arr[i+1]) {

int tmp = arr[i];

arr[i] = arr[i+1];

arr[i+1] = tmp;

}

}

for (int i = 0; i &lt; len; i++) {

cout &lt;&lt; arr[i];

}

cout &lt;&lt; endl;

}

## Part 2:

- 1) (2 pts) In any programming language (python, java, c, c++) write a function that takes as input an array of integers and an integer representing the length of that array. The function should traverse the array to find the smallest integer in the array and, at the end, print out the smallest integer in the array (and only the smallest integer).

```
void findMin(int arr[], int len) {
    int small = arr[0];
    for (int ind = 1; ind < len; ind++) {
        if (arr[ind] < small) {
            small = arr[ind];
        }
    }
    cout << small << endl;
}
```

- 2) (3 pts) In the wordle project, you had to take two strings. You needed to traverse the strings such that if a letter in the first string occurred in the second string, you should place a 'y' character in an array of characters that was the same length as both strings.

To make this easier, you can assume the following: The strings (and the character array are all exactly the same length, there are no double-letters in either string (so tubes is okay but not teeth or enter), and there is no letter in the first string that occurs in the same location in the second string. (so tubes and tiger would not occur, but tubes and baste could occur

```
void findYs(string a, string b, char Y_arr[], int len) {
    for (int ind = 0; ind < len; ind++) {
        bool found = false;
        int ind2 = 0;
        while (!found && ind2 < len) {
            if (b[ind2] == a[ind]) {
                Y_arr[ind] = 'Y';
                found = true;
            }
            ind2++;
        }
    }
}
```