

CSI 32 Midterm Exam Preparation Guidelines

The Midterm Exam covers Chapters 2 – 8. Please be aware that the exam will be closed book and notes and limited use of computers in the lab. No smart phones, no laptops, etc.

To prepare for the Midterm Exam:

- 1) Review all quizzes,
- 2) Review the in-class work/practice,
- 3) Review all the examples given in class,
- 4) Go over the **Review** questions and **Terms** at the end of each chapter
- 5) Look over your homework
- 6) Types of questions that you can meet:
 1. True/False and Multiple – Choice questions
 2. Give a definition of a term (for example, What is a literal?)
 3. Look at a code fragment with syntax errors, find them and fix them
 4. Look at a code fragment, explain what does it do and what is the output / what is displayed
 5. Write a code block (or a line of code) that does something (you will be told what it should do)
 6. Given an iterative procedure, give its recursive version or write a recursive procedure without iterative version, and others

Here are some examples of questions:

A. Why with a `vector` called `v`, is `v[v.size()]` a range error?

What would be the result of calling this, assuming it was allowed to execute this statement?

B. Look at the code below.

1. Explain what does it do in general, in particular, state what happens at each iteration, give values of variables at each iteration and explain how they change.
2. What are the values of `v1` and `v2` after its execution.

```
int v1 = 15, v2 = 54;
do {
    v1 -= 1;
    v2 = v2 / 2;
} while (v1 < v2);
cout << "v1 = " << v1 << ", v2 = " << v2;
```

C. What goes into an activation record?

D. The following code fragment will no compile. What is wrong with it?

```
... // some code here
```

```
void displayArray(const vector<int>&);
```

```
int main() {
```

```
    vector<int> x;
```

```
    ... // code that fills the vector x with values
```

```
    displayArray(myArray);
```

```
}
```

```
void displayArray(const vector<int>& a) {
```

```
    for (int i = 0; i < a.size(); i++) {
```

```
        cout << a[i] << "\t";
```

```
        a[i] *= 2;
```

```
    }
```

```
    cout << endl;
```

```
}
```