COSC 111:
Computer Programming I

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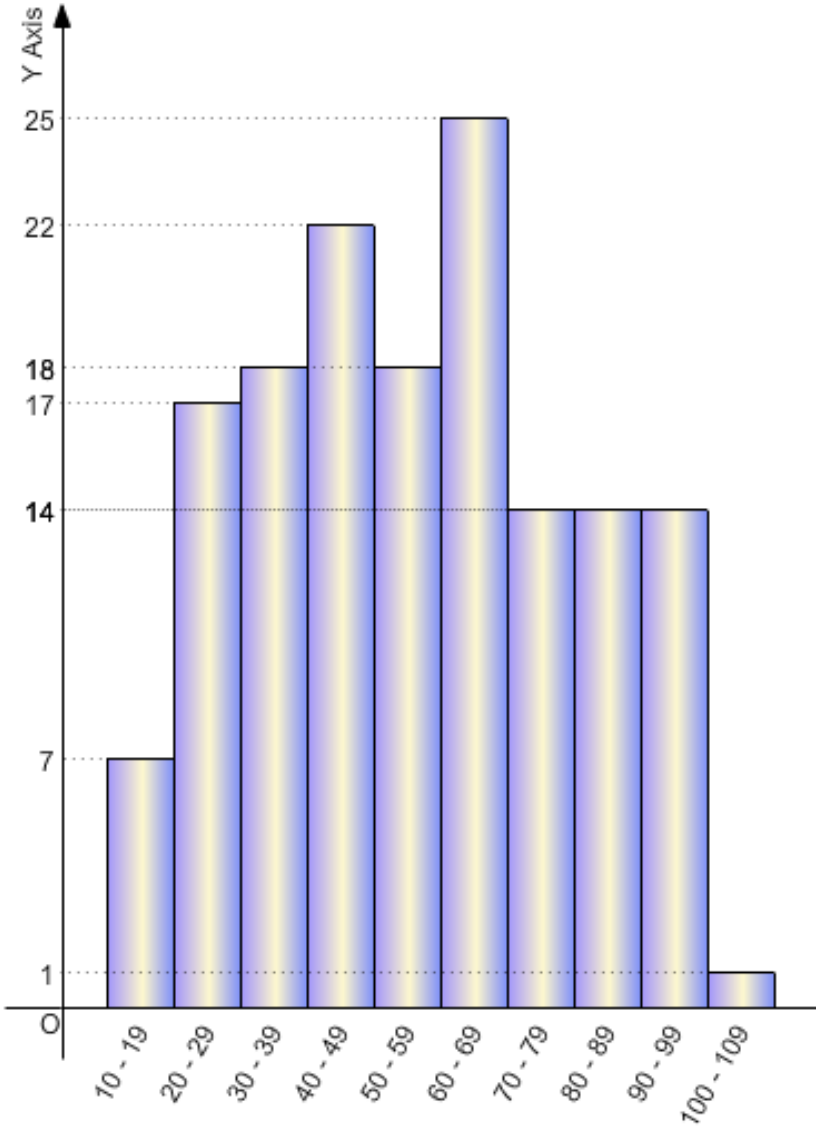
Midterm 2 feedback

- Statistics:
  - Average: 28.0/50 (55.9%)
  - Max: 50/50 (100%)
  - N = 150
  - About one-third of the class got 70+%
  - 15 students got 90+%
  - ***38 students got a higher MT2 mark and had their MT1 mark replaced***
    - Average: 8% improvement
    - Max: 38% improvement



Part 1: Multiple Choice

- Answers:
  - C, D, B, E, E, D, B, D, A, B
- Common mistakes:
  - Question 4, 5, 8, 9

Part 1: Question 4

4. Given a specific integer value of **x** and the following code, how many statements will get executed?

```
if( x == 0 )
  System.out.println( x );
```

(a) 0

(b) 1

(c) 2

(d) 3

(e) Cannot be determined

Part 1: Question 5

5. In the following code, how many "here"s will get printed?

```
int count = 0;
while( count < 5 )
  System.out.println( "here" );
count++;
```

(a) 0

(b) 1

(c) 5

(d) 6

(e) Keep printing until you interrupt the program; this is an infinite loop

Part 1: Question 8

8. In the following code, what is the value of y?

```
int i = 5;
for( i=0; i<8; i++ )
  if( i % 2 != 0 )
    System.out.println( "i = " + i + ": here" );
int y = i;
```

(a) 0

(b) 5

(c) 7

(d) 8

(e) None of the above

Part 1: Question 9

9. How many names will be printed in the following code?

```
String[] names = {"eva", "ann", "cam" };
for( int i=0; i<=names.length; i++ )
  System.out.println( names[i] );
```

(a) 3, but the program will crash with an ArrayIndexOutOfBounds Exception

(b) 3, with no errors

(c) 4, with no errors

(d) Keep printing until you interrupt the program; this is an infinite loop

(e) Cannot be determined

Part 2: Understanding Code

- Question 1 answers:
  a. false
  b. true
  c. true
  d. true
  e. true
- Common mistakes:
  - Not saying true or false
  - Even if say true/false in other parts, when asked x.equals(y), still not saying true or false

Part 2: Understanding Code

- Question 2 (sample) answer:

```
if( x < 5 && y < 9 && z < 6 )
        System.out.println( “case 1” );
else if( x < 5 && y < 9 && z >= 6 )
        System.out.println( “case 2” );
else if( x < 5 && y >= 9 && z < 6 )
        System.out.println( “case 3” );
else if( x < 5 && y >= 9 && z >= 6 )
        System.out.println( “case 4” );
else
        System.out.println( “case 5” );
```

- Common mistakes:
  - Missing =
  - Not using else if
  - Using loop instead of conditional
  - Using nested if statement (ignoring instructions)

Part 2: Understanding Code

- Question 3 answer:
  words[0] = This, targets[0] = awesome
  words[0] = This, targets[1] = good
  words[0] = This, targets[2] = cool
  words[1] = AWESOME, targets[0] = awesome
  found
- Common mistakes:
  - Only printed “found” or “not found”
  - Printed only the last two lines but not intermediate lines
  - Input parameters passed in backwards

Part 3: Writing Code

- Question 1 (sample) answer:

```
public boolean equals( Player other )
{
        if( firstName.equals( other.getFirstName() ) &&
              lastName.equals( other.getLastName() ) &&
              id == other.getId() )
              return true;
        else
              return false;
}
```

- Common mistakes:
  - No Player object as input
  - Did not use accessors
  - Mixing up == and equals()

Part 3: Writing Code

- Question 2 (sample) answer:

```
private void prBins()
{
        for( int i=0; i<MAXBINS; i++ )
        {
              for( int j=0; j<bins[i]; j++ )
                    System.out.print( “*” );
              System.out.println();
        }
}
```

- Common mistakes:
  - Not using bins[] (e.g., using grades[] instead)
  - Declared method as public
  - No return type
  - Some example with two loops were copied as answer

What to Take Away

- Identify the kind of mistakes you made
  - E.g. “Typos”: nervous, didn’t sleep enough
  - E.g. Conceptual: still don’t get it, didn’t practice enough
- Typos:
  - Easy to avoid in the future
  - Be careful, read slowly/carefully
  - Sleep well before exam
- Conceptual:
  - Need to ask for help
  - Need to do extra practice

Next Exam

- Same format
- Build on everything we've done
  - Need to understand this exam
- Final exam: 30%
  - Must pass final to pass the course
  - Do practice "SR" questions from the text
  - Do programming questions from the text – selected ones will be posted
  - If you get a better mark, it will replace your midterm 1+2's marks

Scenario 1

```
if( FinalExam_Score > MT1_Score &&
    FinalExam_Score > MT2_Score )
{
        MT1_Score = FinalExam_Score;
        MT2_Score = FinalExam_Score;
}
```

Scenario 2

```
if( FinalExam_Score > MT1_Score &&
    MT2_Score > FinalExam_Score )
{
        MT1_Score = FinalExam_Score;
}
// MT2_Score unchanged
```

Scenario 3

```
if( FinalExam_Score > MT2_Score &&
    MT1_Score > FinalExam_Score )
{
        MT2_Score = FinalExam_Score;
}
// MT1_Score unchanged
```

Scenario 4

// all other cases:
// MT1_Score unchanged
// MT2_Score unchanged

Remaining Labs

- This week (Week 12):
  - Tuesday: Lab 10
  - Wed/Thu/Fri: TA Office Hours
- Next week (Week 13):
  - Tuesday: TA Office Hours
  - Wed/Thu/Fri: Cancelled
- What to ask your TA:
  - Any lab marks for appeal – check Connect to make sure!
  - Any course material you want help with: previous labs, old/current assignments, midterm questions