

CS111: Introduction to Computer Science – Recitation 3

Exercise 1: Typing/Casting & Arithmetic

What is the value of {a, b, c, d} at locations {1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12}? Why?

```
int a = 5;
int b;
double c = 5.42;
double d;
b = a;           (1)
d = a;           (2)
d = c;           (3)
b = c;           (4)
b = (int)c;      (5)
c = a+b;         (6)
c = d+a*b;       (7)
c = (d+a)*b;     (8)
b = a/a;         (9)
b = a/c;         (10)
b = (int)c/a;    (11)
d = c/a;         (12)
```

Exercise 2: Library Calls - Drawing with Picasso

For this exercise we will use a module called “Picasso” that supplies the following methods to draw lines and circles on the screen. The module keeps track of the current position on the screen of the “pen” that is used to draw, which starts out at the upper left-hand corner.

- a) Write a program that draws a smiley face. The size of the smiley face should be an input from the user using the IO module.
- b) As a group come up with a picture to draw and draw it.

Methods:

drawCircle(int diameter)

This method draws a circle of the given diameter (in inches), centered around the current position (and doesn't change the current position).

drawLineDown(int length)

This method draws a vertical line of the given length, starting from the current position and going straight down. The current position is not changed.

drawLineRight(int length)

This method draws a horizontal line of the given length, starting from the current position and going straight to the right. The current position is not changed.

moveRight(int d)

This method moves the current position d inches to the right.

moveLeft(int d)

This method moves the current position d inches to the left.

moveUp(int d)

This method moves the current position d inches up.

moveDown(int d)

This method moves the current position d inches down.