CS111 Introduction to Computer Science
Recitation 4

Exercise 1: Conditionals Practice

a) Ask the user for their age and output if they are allowed to vote (18 and above)
b) Assume you are about to give a ticket to a person you caught speeding. Get the speed as the input and output the correct fine.

- less than or equal to 60: $0
- above 60 and less than or equal to 75: $100
- above 75 and less than or equal to 90: $200
- above 90: $500

Exercise 2: Java - Drawing with library calls

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.

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.

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

Exercise 3: Logical Thinking

Two skydivers are dropped from a plane and land on a long, straight east-west road. Neither one knows where on the road the other has landed. Neither one even knows whether the other has landed to the east or to the west. The skydivers can do four things: walk east, walk west, put down their parachute, or pick up their parachute.

Propose an algorithm for the skydivers to follow that will guarantee that they will meet up with one another.
Note that there should be a single algorithm that both skydivers will follow separately.