CSE111- Lab Week of 2/25

In Lab you will learn about Karel the Robot's world and capabilities. The task for this week is to familiarize yourself with Karel and his world.

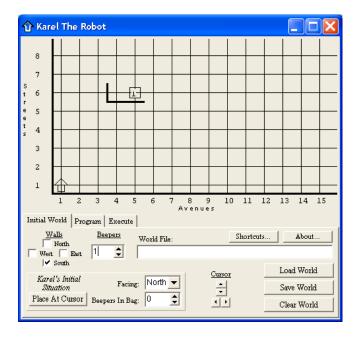
I) Create and Save a World.

1) Create two walls and place a beeper behind them as show in this screen shot.

2) To create a **wall**, place the cursor (the pointer that moves around your computer screen) between two streets or avenues and click. Try moving the cursor around and clicking to see what happens. To remove a wall put in the wrong place just click on it again.

3) To place a **beeper** down in a location. Go to the intersection of a particular street and avenue click on that location. A small box will appear in that location. Go down to the bottom section of the screen. Find the section called Beepers. And change it from 0 to 1.

4) Save the World calling it WorldOne.yourlastname



- II) Type in and Compile the program.
 - 1) Click on the tab labeled Program
 - 2) Click on the button labeled New Program

1 Karel The Robot	:		
	· · · · · ·		
Initial World Program	Execute		
Open Program	New Program	Edit Program	Save Program
Compile	Save As	Print Program	Abort Changes
Source File:	Show Warnin	gs During Compile	Font Size:
1			·

H. Kershner

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3) You will be asked to give your program a name. Call it KarelOne.yourlastname

Create New Karel Program	? 🔀
Save jn: 🞯 Desktop	. ← 🛍 💣 📰 -
My Documents My Computer My Network Places Calif Photos SE111 Family	
File <u>n</u> ame: KarelOne.kershner	Save
Save as type: Karel Program	✓ Cancel

4) Karel will now bring up a screen with the basic outline of a program.

1 Karel The Robot				
beginning-of-program beginning-of-execution				
turnoff;				
end-of-execution end-of-program				
Initial World Program Ex	ecute			
Open Program	New Program	Edit Program	Save Program	
Compile	Save As	Print Program	Abort Changes	
Source File:	Show Warning	s During Compile Fon	t Size:	
C:VDocuments and Settings	VHelene KershnerVDe	sktopWarelOne.ke	13 🔹	

- 5) Between the words --- beginning-of-execution -- and --- turnoff type in the following program EXACTLY. Semicolon's matter (;). Your goal is to enter a program that moves Karel so it can pick up the beeper. From where Karel starts at the intersection of Avenue 1 and Street 1, the beeper is blocked by a wall.
- 6) After you type in the program.
 - a. Save the program in the file you called KarelOne.yourlastname
 - b. Compile your program.
 - c. When you do this, you might get messages like

KarelTheRobot
Missing semicolon between move and move at line 14.
ОК

d. Fix your errors, save and Compile until all errors are removed.

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This is what the program looks like after it has been properly Compiled and is ready to go.

🏠 Karel The Robot 📃 🗖 🔀					
1 beginning-of-program					
2 beginning-of-execution					
4 turn 5 turn 6 move 7 move 8 move 9 move 10 move 11 turn 12 move 13 move 14 move 15 move 16 move 17 turn 18 move 19 pick 20 turn	;; ;; ;; ;; ;; ;; ;; ;; ;; ;; ;; ;; ;;				
22 End-or-pro	gram		*		
Initial World Program Execute					
Open Program	New Program	Edit Program	Save Program		
Compile	Save As	Print Program	Abort Changes		
Source File:	Source File: 🔽 Show Warnings During Compile Font Size:				
C:VDocuments and Set	tings\Helene Kershner\D	esktopWarelOne.ke	13 🗘		

Here is the Program!

```
beginning-of-program
   beginning-of-execution
      turnleft;
      turnleft;
      turnleft;
      move;
      move;
      move;
      move;
      move;
      turnleft;
      move;
      move;
      move;
      move;
      move;
      turnleft;
      move;
      pickbeeper;
      turnoff;
   end-of-execution
end-of-program
```

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III Execute (same as having Karel wake up and do something) the program.

- 1) Click the Initialize button to place Karel at what can be considered "home base" (where Street1 and Avenue 1 intersect).
- 2) When the following Pop-up appears just click OK.

KarelTheRobot	
Karel's world has been initialized and his program is ready to Step or Run from its beginning.	
To predict Karel's next program line, click on it. To predict that he will shut down, click his current line. If you use the buttons, your correct/incorrect counts will be set to zero!	
OK	

- 3) Click the Run button and see what happens. If you typed in all the commands exactly, Karel will make some turns, avoid the wall and pickup the beeper. If that doesn't happen you will need to correct look over your program to see what you did wrong and correct it.
- 4) When you have solved this lab correctly, Print off a copy of your code. Sign it and put your person number and Lab on it and give it to the TA.