

I. CrabCriticr

A) Using BlueJ open from the G drive in the BlueJ folder in the GridWorld folder **ch4lab3**  
Run the CrabRunner program.

B) Look at the code for CrabRunner, CrabCriticr, and read page 6 of the  
GW Chapter 4 packet then answer the following

1) A CrabCriticr extends what class? 1) \_\_\_\_\_

2) a) Does CrabCriticr have a processActors( ) method that overrides  
the processActors( ) method in Critter? (yes/no) 2a) \_\_\_\_\_

b) Does a CrabCriticr “eat” flowers? (yes/no) b) \_\_\_\_\_

c) i) Will a CrabCriticr “eat” a Critter? (yes/no) c) \_\_\_\_\_

ii) Explain why or why not.  
(Hint: Look in the Critter class at the processActors( ) method

ii) \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

d) Does CrabCriticr have a getActors( ) method that overrides  
the getActors( ) method in Critter? (yes/no) d) \_\_\_\_\_

e) Does a CrabCriticr “eat” flowers and other objects exactly like  
a Critter? (yes/no) (Hint: Look at the getActors( ) methods.) e) \_\_\_\_\_

f) Explain what the code below from CrabCriticr getActors( ) does

```
ArrayList<Actor> actors = new ArrayList<Actor>( );  
int[] dirs =  
    { Location.AHEAD, Location.HALF_LEFT, Location.HALF_RIGHT };  
for (Location loc : getLocationsInDirections(dirs))  
{  
    Actor a = getGrid().get(loc);  
    if (a != null)  
        actors.add(a);  
}
```

f) \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**over**

g) If a CrabCritic has location (3 , 4) and faces south, what are the possible locations for actors that are returned by a call to the `getActors( )` method?

g) \_\_\_\_\_

3) a) Does CrabCritic have a `getMoveLocations( )` method that overrides the `getMoveLocations( )` method in Critter? (yes/no) 3a) \_\_\_\_\_

b) How many possible items could CrabCritic's `getMoveLocations( )` return? b) \_\_\_\_\_

c) How many possible items could Critter's `getMoveLocations( )` return? c) \_\_\_\_\_

d) If a CrabCritic has location (3 , 4) and faces south, what are the possible locations that are returned by a call to the `getMoveLocations( )` method? (Note: Write the answers as ordered pairs.)

d) \_\_\_\_\_

4) a) Does a CrabCritic have a `makeMove( )` method that overrides the `makeMove( )` method in Critter? (yes/no) 2a) \_\_\_\_\_

b) If a CrabCritic can not move does it do the same thing as a Critter? (yes/no) b) \_\_\_\_\_

c) If a Critter can not move what does it do? (Hint: Look at the code of a Critter or look at Ch4Lab1.)

c) \_\_\_\_\_

d) If a CrabCritic can not move what does it do?

d) \_\_\_\_\_

**Turn in this sheet to be graded!**