## CSE 332: Data Structures and Parallelism

# Winter 2018

#### How to Increase Memory in Eclipse

### When?

Please read this document if you are experiencing poor performance in Zip (for P1) and/or uMessage (P2), or if you are getting java.lang.OutOfMemoryError when you run your program.

### Why?

Whenever you instantiate objects or arrays in Java using the *new* keyword, you are allocating memory on the heap. (Take CSE 351 for more information about memory allocation.) The above error occurs whenever your program allocates more memory than the max available heap space given to Java. In particular, some parts of the projects in this course may use more memory than Eclipse's default max heap space, which can result in poor performance or an error like the one above.

### The Fix?

To fix this, do the following steps:

- (1) In the top bar on Eclipse, click *Run* and then click *Run Configurations*.
- (2) On the left pane, under *Java Applications*, select the application that is giving you the error. For P1 and P2, this application will be Zip and uMessage, respectively.
- (3) Once you have selected the right application, click the Arguments tab on the right.
- (4) Under *VM Arguments*, add "-Xmx3G" without the quotation marks (see the screenshot below for an example). This will allow Eclipse to grow the heap size to up to 3 GB of memory.

	Run Configurations	
<ul> <li>Create, manage, and run configu</li> <li>Run a Java application</li> </ul>	rations	
Image: Second Seco	Name: Uudessage           Main         (a)         ABL         Classpath         Source         Environment         Common           Program arguments:	Variables
J uMessage Ju UJnit nd Maven Build J Task Context Test	Working directory:           D Default:           Other:           Workspace           File System	Variables
?	Close	Run

(5) Click Run. This will save the setting and run your program again.