

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.

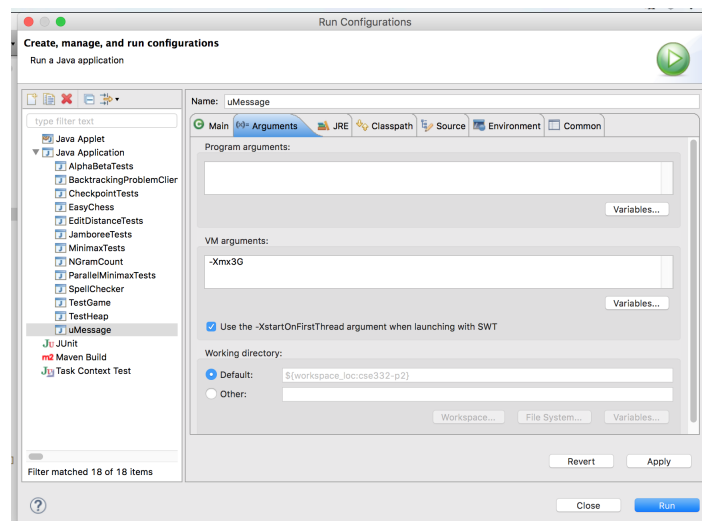
Why?

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.



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