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**ASSIGNMENT 4 REPORT**

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Section: BS-SE (5A)

Subject: Software Construction & Development

Date of Submission: 27/11/2022

**Description of Program**

This Program is develop to calculate the complex physics equation for Kinetic Energy(KE) and Electrical Potential Energy(EPE) ;

Formula for KE & EPE is:

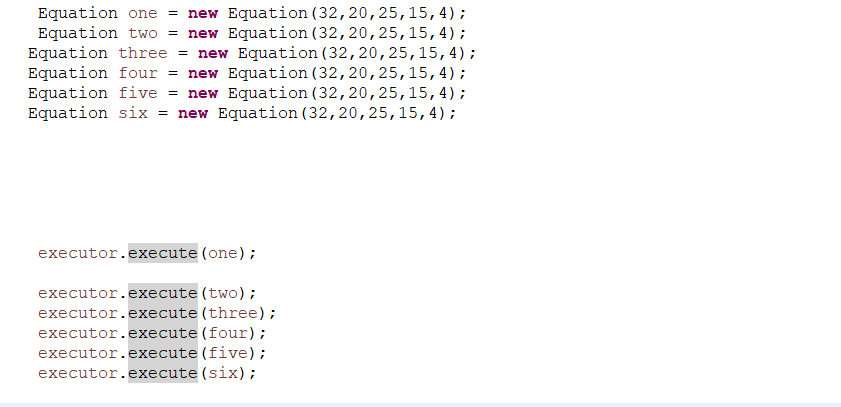


**Multithreading using Java Executable-Framework**

Using Executable framework 6 thread is setup and allocate all the task to these threads.



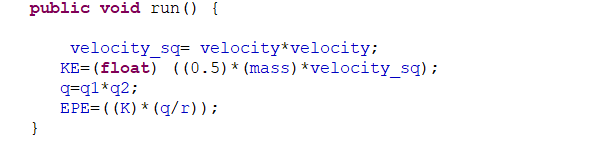
* Now input the all the values for solving equation is given through constructor and pass it to ExecutorSevice



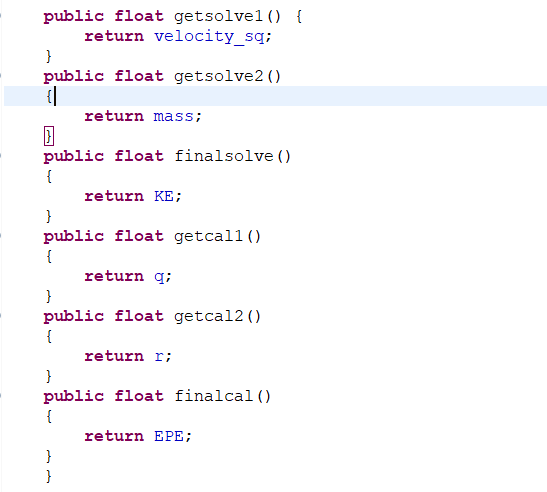
* Values include (mass, velocity, charge, distance between two object:



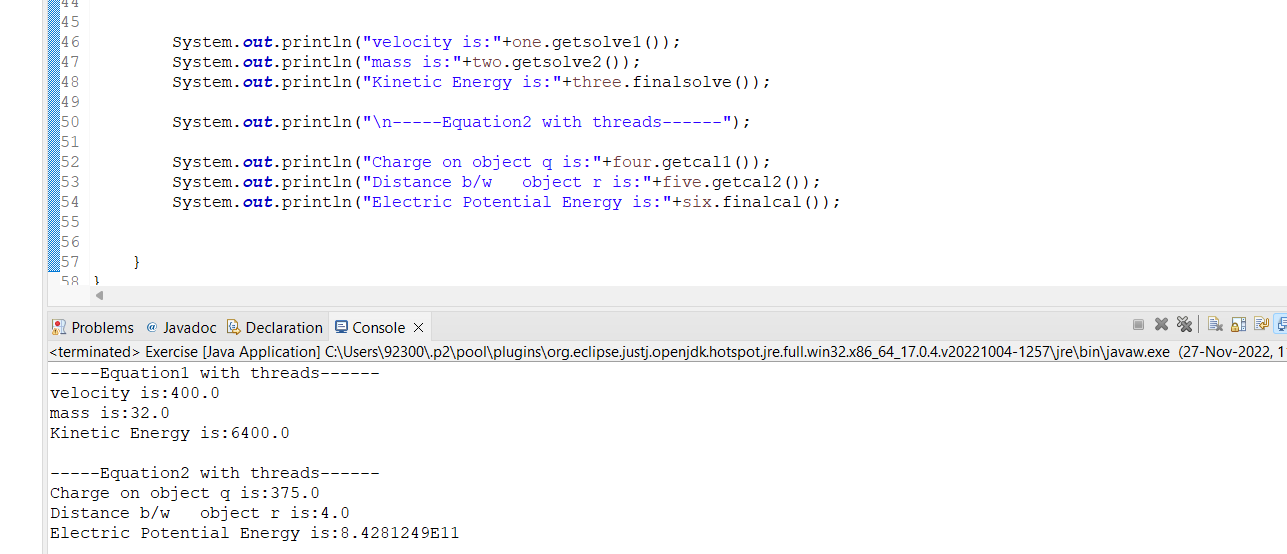
* Runnable function is used to calculate the final result of the Equation



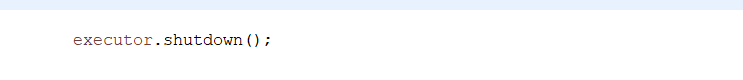
* While the individual calculation of the components pass to avaialble threads



* The output is as follows:



* The executor Service is shutdown when thread are no more in use in order to save resources



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