**Task 2 - Data Creation & Storage**

**Create** a new Java Servlet called ***AddUserNumbers****.*

1. **Modify** the *doPost* method so it:
   1. **Creates** a single String from the received 6 integers (e.g. "1,2,3,4,5,6")
   2. **Creates** an Encryption/Decryption keyPair object (**asymmetric-key encryption**) or Key object (**symmetric-key encryption)**and adds it as an attribute to the session object.
      * [**See below:***A Note about HTTPSessions and HttpServletRequests*]
      * [**Note:** *key only needs to stored for a single session (for marking purposes)*]
      * [**Note:** *I have tweaked the spec here to allow for****asymmetric-key encryption (key pair)****or****symmetric-key encryption (single key)***]

#### ****Task 4 - Finishing Touches****

1. **Extend** and expand the ***accounts.jsp***page
   1. When the stored winning lottery numbers (one line of 6 numbers) is checked against all the user's current lottery draws for a match make sure all user draws are then removed.
      * [**Note:** effectively we can assume that the lottery draw is over so the users must start again and add new draws for the next one]
2. Extend application to remove any user files from tomcat when application is closed (e.g. via docker or intelliJ)
   1. [**Tip:** I will give a demo of how to do this in week 4]
3. **Tidy**code including structure
4. **Comment** code
   1. [**Note:** it is not necessary to comment every line, just chunks or bits of functionality that may not be clear]
   2. [**Tip:** remove any comments from original template; my name may be there!]
5. **Remove** any unnecessary repeated or redundant code
6. **Test**all functionality
7. **Get** your web application docker ready for submission by following these steps:
   1. Make sure the line String DB\_URL = "jdbc:mysql://db:3306/lottery"; is uncommented in all servlets interacting with database. All similar lines should be commented.
   2. Build the LotteryWebApp\_war.war file and place a copy in the Directory CSC2031 Coursework/tomcat/webapps
      * [**Note:** your war file may have a slightly different name, e.g. LotteryWebApp-1.0-SNAPSHOT.war]
   3. Make sure data.sql file in the directory CSC2031 Coursework/db is up to date
   4. Check the docker-compose.yml file and look for the line - ./tomcat/webapps/LotteryWebApp\_war.war:/usr/local/tomcat/webapps/LotteryWebApp\_war.war. Make sure the highlighted part matches the name of your war file. For instance - /tomcat/webapps/LotteryWebApp\_war.war:/usr/local/tomcat/webapps/LotteryWebApp\_war.war  or - ./tomcat/webapps/LotteryWebApp-1.0-SNAPSHOT.war:/usr/local/tomcat/webapps/LotteryWebApp\_war.war