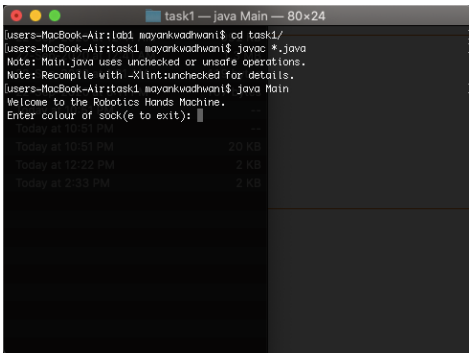
CS-431 PROGRAMMING LANGUAGES LAB PROJECT README

TASK-1 SOCK MATCHING ROBOT

Instructions to run

a) *cd task1*
b) *javac *.java*
c) *java Main*



General Instructions

Once the program starts, it asks for inputs of socks (now the input has been made in such a way that you need to enter 1,2,3 or 4 corresponding to the colours white, black, blue and grey. When finished you must enter e. After this you will be prompted to enter the number of robotic arms in the system. After that, you will see the output.

```
users-MacBook-Air:task1 mayankwadhwani$ java Main
Welcome to the Robotics Hands Machine.
Enter colour of sock(e to exit): 1
Enter colour of sock(e to exit): 2
Enter colour of sock(e to exit): 3
Enter colour of sock(e to exit): 1
Enter colour of sock(e to exit): 4
Enter colour of sock(e to exit): 4
Enter colour of sock(e to exit): 3
Enter colour of sock(e to exit): 2
Enter colour of sock(e to exit): e
Enter the number of Robotics Arms(default is 4): 3
```

Figure 2 Giving input

```
Robotic Arm 1 picked up White and sent to Matching Machine
Robotic Arm 3 picked up Blue and sent to Matching Machine
Robotic Arm 2 picked up Black and sent to Matching Machine
Robotic Arm 3 picked up White and sent to Matching Machine
Robotic Arm 2 picked up Grey and sent to Matching Machine
Robotic Arm 1 picked up Grey and sent to Matching Machine
Matching Machine received: White pair of socks, sending to the appropriate shelf
Matching Machine received: Grey pair of socks, sending to the appropriate shelf
Robotic Arm 2 picked up Black and sent to Matching Machine
Matching Machine rests
Robotic Arm 3 rest since no socks left on the belt.
Robotic Arm 1 picked up Blue and sent to Matching Machine
Robotic Arm 2 rest since no socks left on the belt.
Robotic Arm 1 rest since no socks left on the belt.
users-MacBook-Air:task1 mayankwadhwani$
```

Figure 1 The desired output

TASK-2 DATA MODIFICATION IN DISTRIBUTED SYSTEM

Instructions to run

a) cd task2
b) javac *.java
c) java main

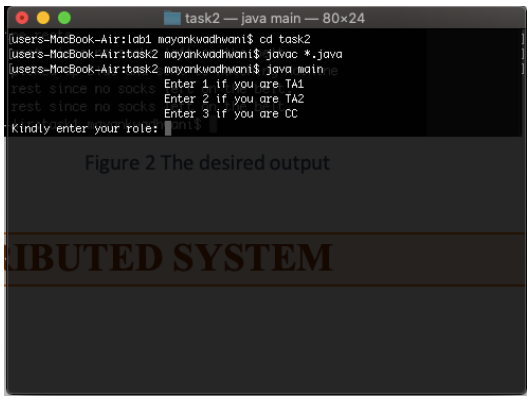


Figure 2 The desired output

General Instructions

Once the program starts, you will be asked to enter your role (like press 1 if you are TA1, etc). Following this, you will be asked to choose the operation that you may wish to perform. Choose the appropriate operation.

NOTE: Since we are using multithreading here for different operations, we may see interleaved output in the terminal.

Attached screenshots:

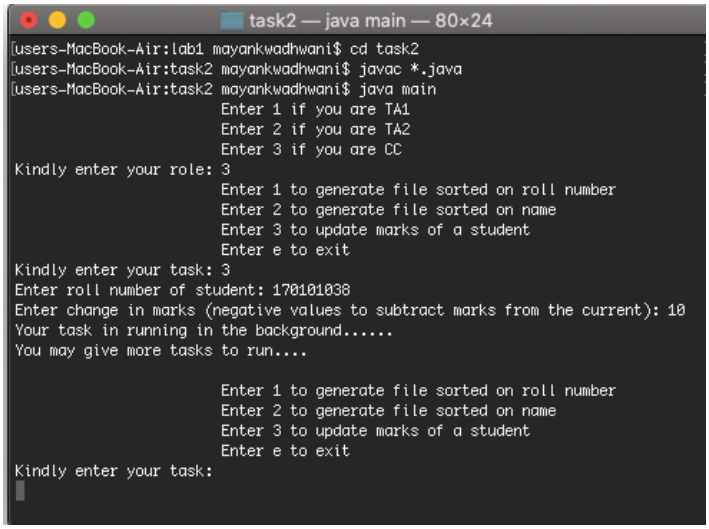


Figure 5 Giving input to program

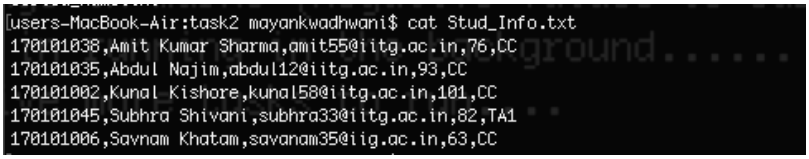


Figure 4 Contents of file before running in the input in Fig 5

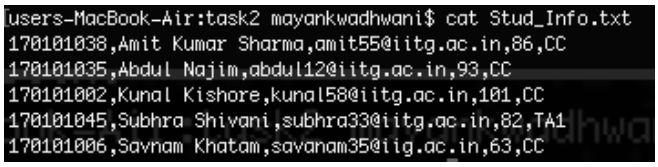


Figure 3 Contents of the file after running the input in Fig 5

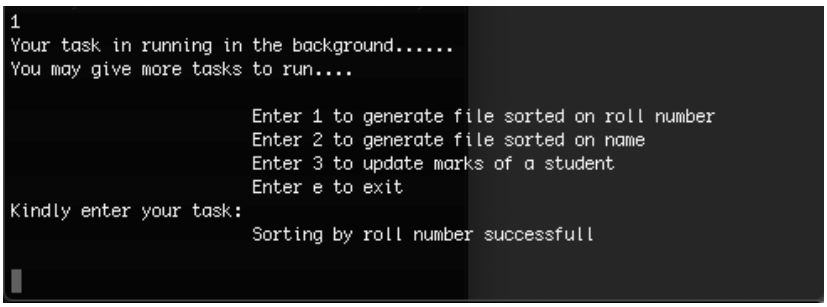


Figure 6 Generating Sorted File

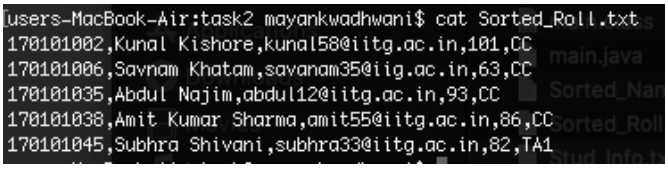
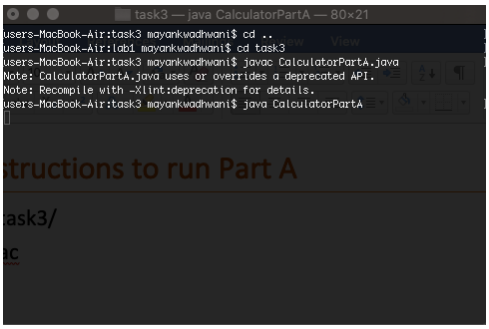


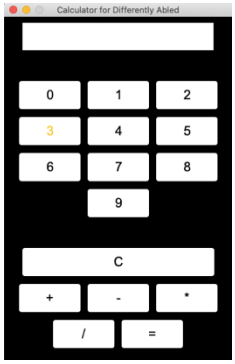
Figure 7 Contents of sorted file by roll

TASK-3 CALCULATOR FOR DIFFERENTLY ABLED

Instructions to run Part A

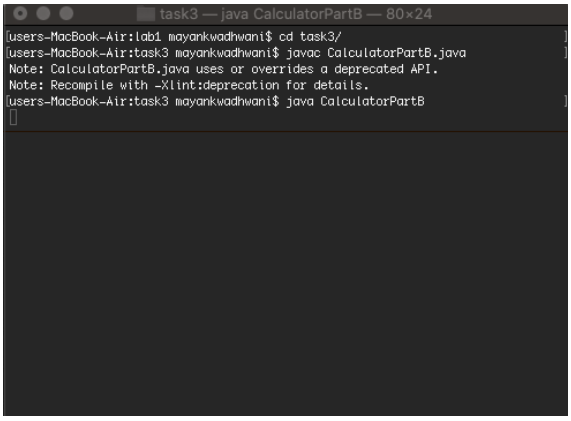
a) cd task3/
b) javac CalculatorPartA.java
c) java CalculatorPartA

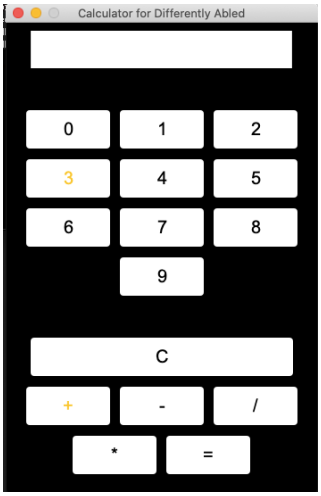




Instructions to run Part B

d) cd task3/
e) javac CalculatorPartB.java
f) java CalculatorPartB





General Instructions

For both the parts, we do as mentioned in the question. Wait for the desired number or operator, press spacebar or enter depending on the part.

Here are screenshots showing working of part B for 16+17.