Report for Lab Assignment 1

Question 1

Description: To perform a Map Reduce operation and to achieve the functionality of matrix addition.

Pseudocode:

Documentation of Matrix Addition using MapReduce

Take matrix A as an input from the console.

Take matrix B as as input from the console.

Matrix A:

1 2 3 ..... n

2 3 4 ..... n

.....

.....

n ..... n

Matrix B:

1 2 3 ..... n

2 3 4 ..... n

.....

.....

n ..... n

Validate the Rows of matrix A = Rows of matrix B

Validate the Columns of matrix A = Columns of matrix B

Result:

Rows: n=n;

Columns : n=n;

Map Operation:

Apply Map operation on the give matrices A,B.

The output of the Map Operation will be a set of (Key, Value) pairs.

The Key will be the row number and the value will be the set of values with in a row.

Result: (Key, V[])

Key will be the row value and V will be the set of values in that particular row.

Now pass this Key value pair which is the output of a Map operation to the Reduce operation.

Here is a place where we perform Arithematic Addition.

Reduce Operation:

The reduce operation will be having two key value pairs each for a matrix.

From each (key,value) pair => consider the set of values (vector/ array) having the same key and add the elements accordingly.

As the two matrices A and B are generated as a key value pairs. We will be having two set of of values whose key is equal. (One from the matrix A and one from the matrix B)

ie; We will be taking the two set of values from the Vector/array and will be adding the two values as per their indices.

Now the obtained results will also be stored into a vector/array and will be associated with the same key number.

As the Key is the row number, the display of the result can be done accordingly.

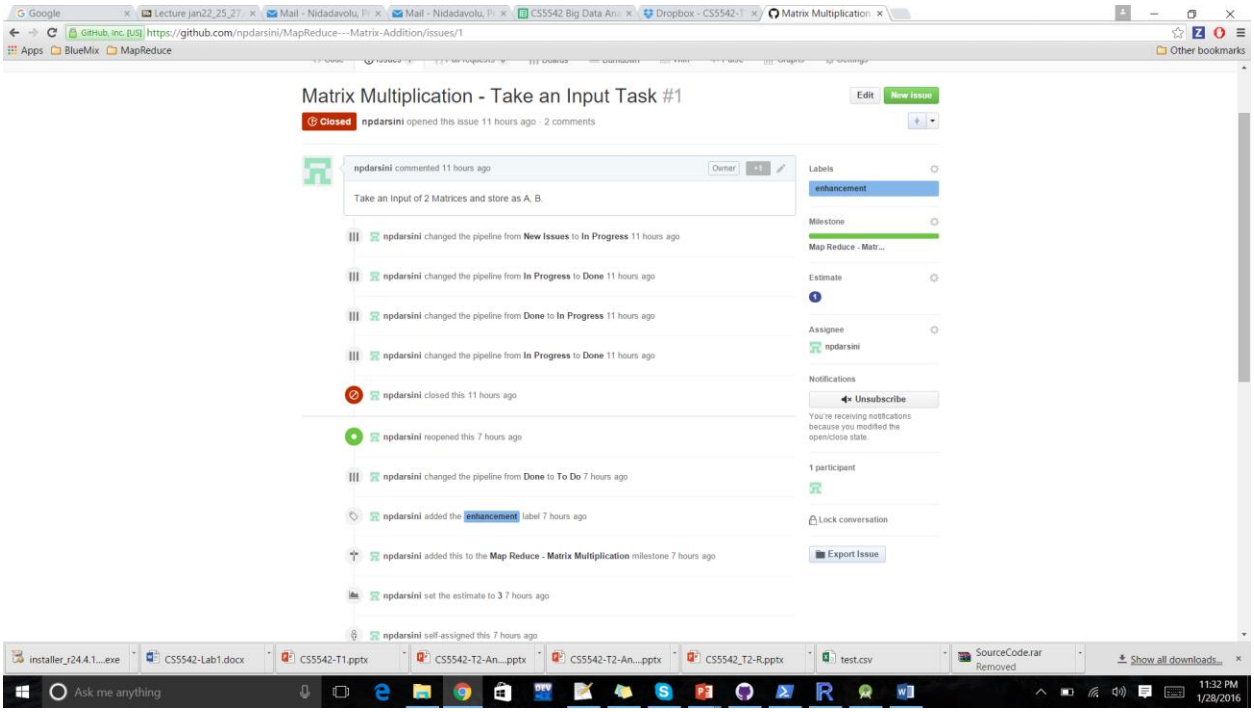
So, the output of the reduce operation is also a (key,value) pair after summing up.

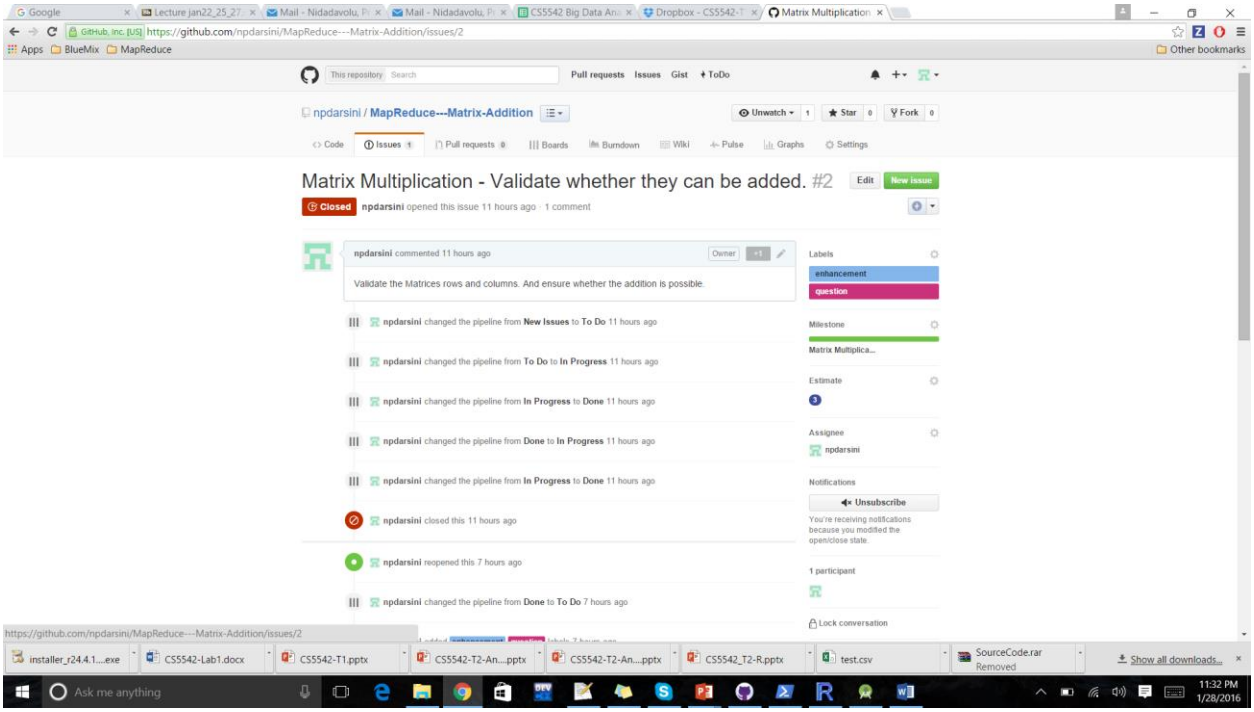
Question 2:

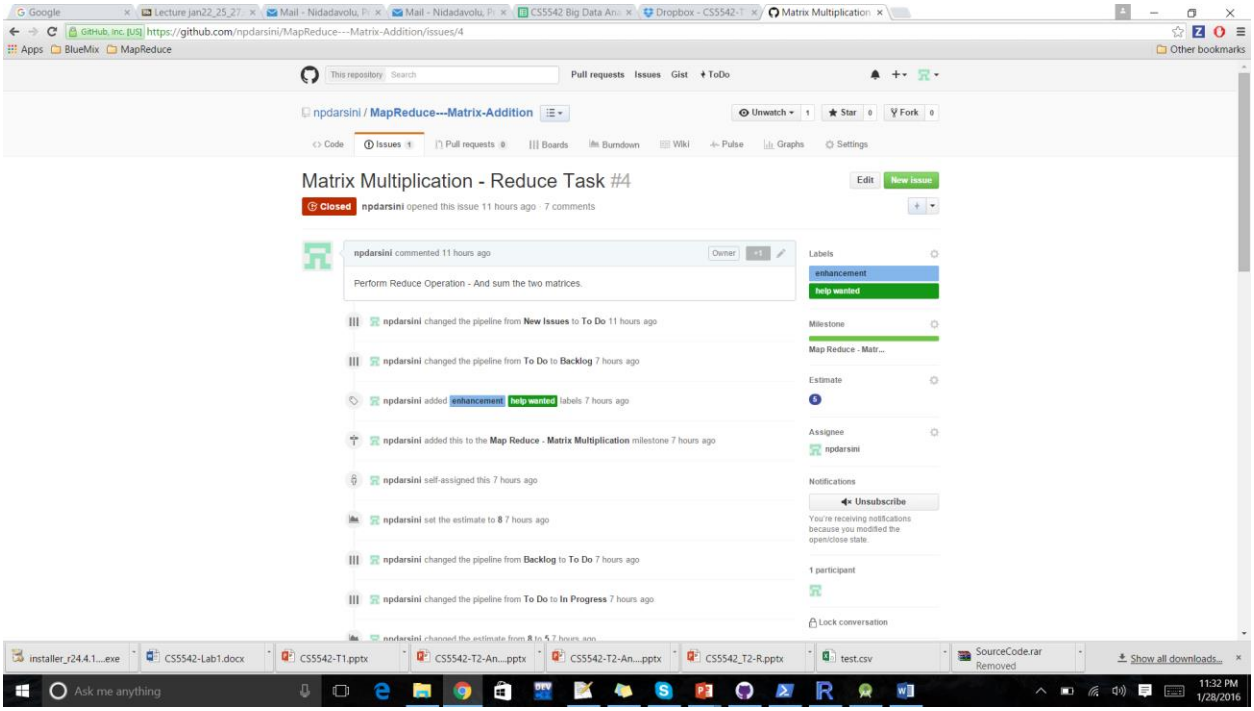
Description: To create tasks and Milestones using ZenHub in order to get used to Agile Methodology.

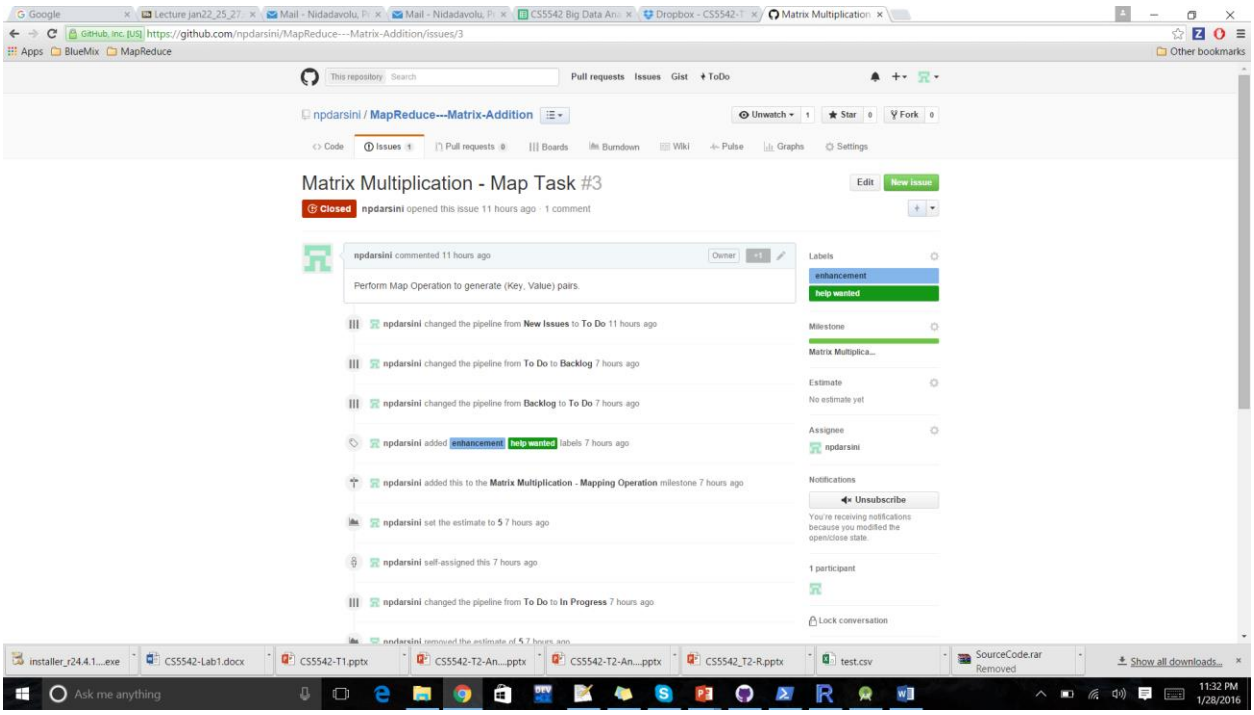
Screenshots:

Task Creation

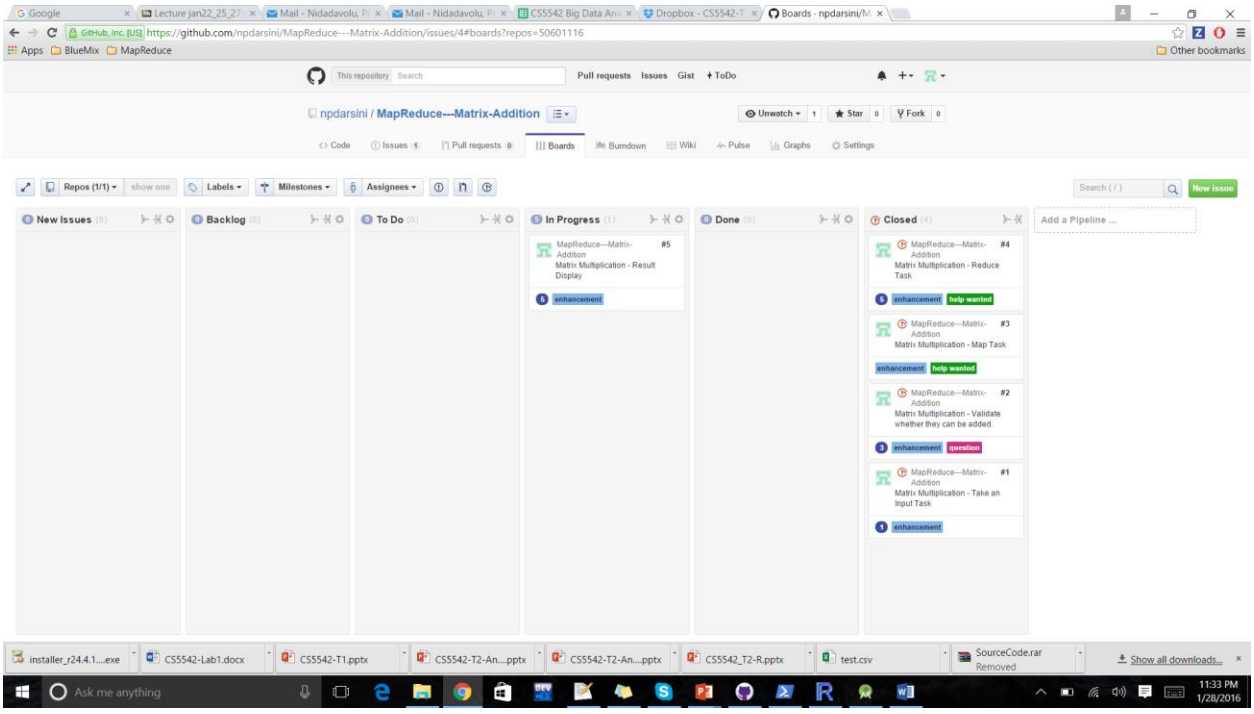



https://github.com/npdarsini/MapReduce---Matrix-Addition/issues/2
npdarsini / MapReduce---Matrix-Addition
Matrix Multiplication - Validate whether they can be added. #2
Closed
npdarsini opened this issue 11 hours ago · 1 comment
npdarsini commented 11 hours ago
Validate the Matrices rows and columns. And ensure whether the addition is possible.
npdarsini changed the pipeline from New Issues to To Do 11 hours ago
npdarsini changed the pipeline from To Do to In Progress 11 hours ago
npdarsini changed the pipeline from In Progress to Done 11 hours ago
npdarsini changed the pipeline from Done to In Progress 11 hours ago
npdarsini changed the pipeline from In Progress to Done 11 hours ago
npdarsini closed this 11 hours ago
npdarsini reopened this 7 hours ago
npdarsini changed the pipeline from Done to To Do 7 hours ago
Labels
enhancement
question
Milestone
Matrix Multiplica...
Estimate
Assignee
npdarsini
Notifications
Unsubscribe
You're receiving notifications because you modified the open/close state.
1 participant
Lock conversation

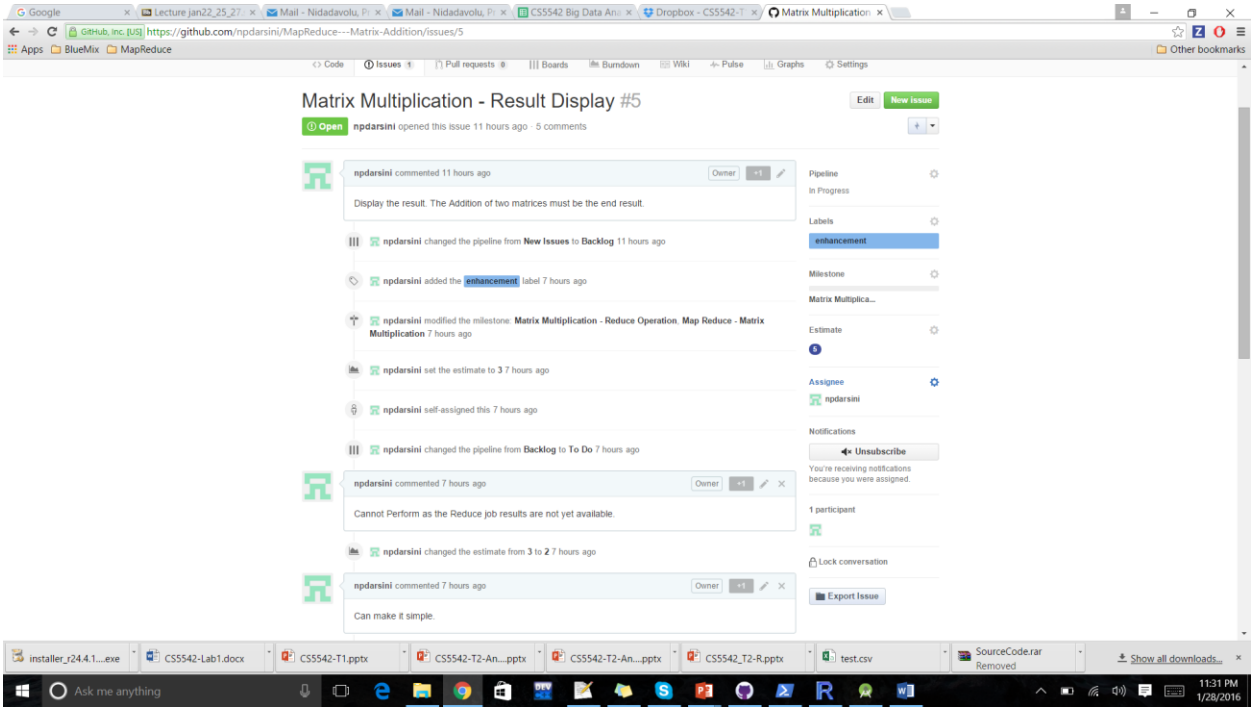

https://github.com/npdarsini/MapReduce---Matrix-Addition/issues/4
npdarsini / MapReduce---Matrix-Addition
Matrix Multiplication - Reduce Task #4
Closed
npdarsini opened this issue 11 hours ago · 7 comments
npdarsini commented 11 hours ago
Perform Reduce Operation - And sum the two matrices.
npdarsini changed the pipeline from New Issues to To Do 11 hours ago
npdarsini changed the pipeline from To Do to Backlog 7 hours ago
npdarsini added enhancement help wanted labels 7 hours ago
npdarsini added this to the Map Reduce - Matrix Multiplication milestone 7 hours ago
npdarsini self-assigned this 7 hours ago
npdarsini set the estimate to 8 7 hours ago
npdarsini changed the pipeline from Backlog to To Do 7 hours ago
npdarsini changed the pipeline from To Do to In Progress 7 hours ago
Labels
enhancement
help wanted
Milestone
Map Reduce - Matr...
Estimate
Assignee
npdarsini
Notifications
Unsubscribe
You're receiving notifications because you modified the open/close state.
1 participant
Lock conversation

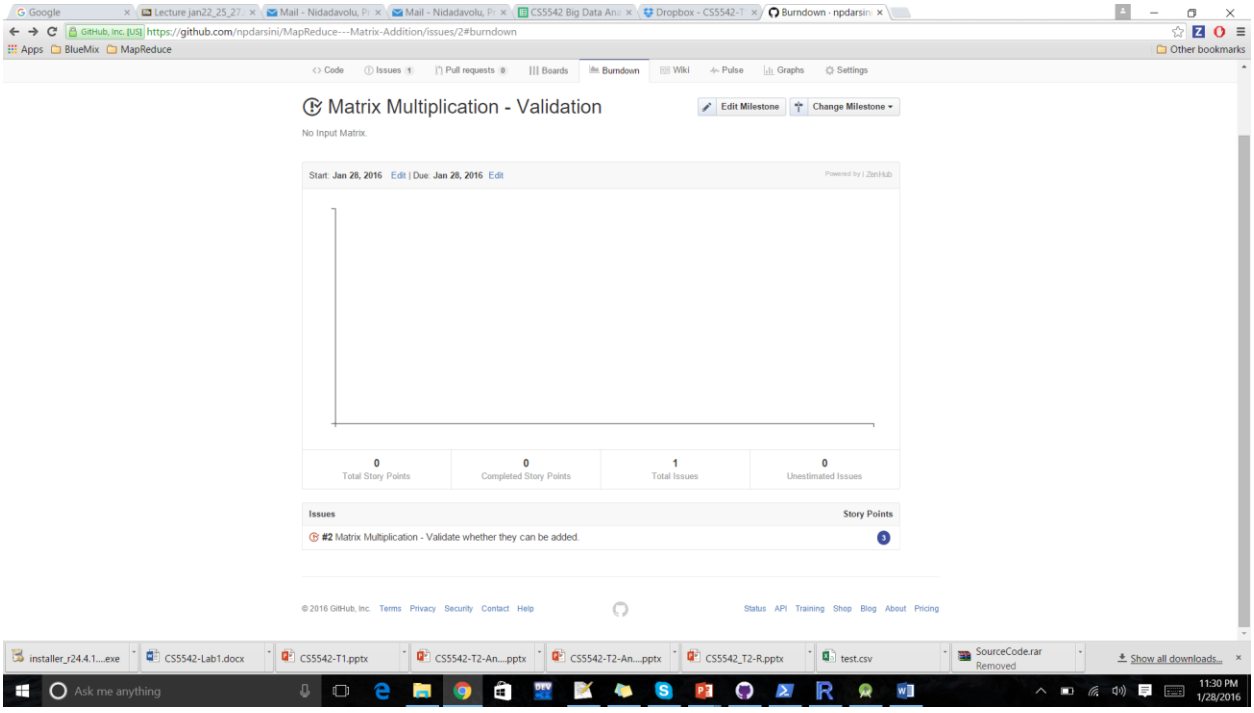

https://github.com/npdarsini/MapReduce---Matrix-Addition/issues/3
npdarsini / MapReduce---Matrix-Addition
Matrix Multiplication - Map Task #3
Closed
npdarsini opened this issue 11 hours ago · 1 comment
Perform Map Operation to generate (Key, Value) pairs.
npdarsini changed the pipeline from New Issues to To Do 11 hours ago
npdarsini changed the pipeline from To Do to Backlog 7 hours ago
npdarsini changed the pipeline from Backlog to To Do 7 hours ago
npdarsini added enhancement help wanted labels 7 hours ago
npdarsini added this to the Matrix Multiplication - Mapping Operation milestone 7 hours ago
npdarsini set the estimate to 5 7 hours ago
npdarsini self-assigned this 7 hours ago
npdarsini changed the pipeline from To Do to In Progress 7 hours ago
Labels
enhancement
help wanted
Milestone
Estimate
No estimate yet
Assignee
npdarsini
Notifications
Unsubscribe
1 participant
Lock conversation

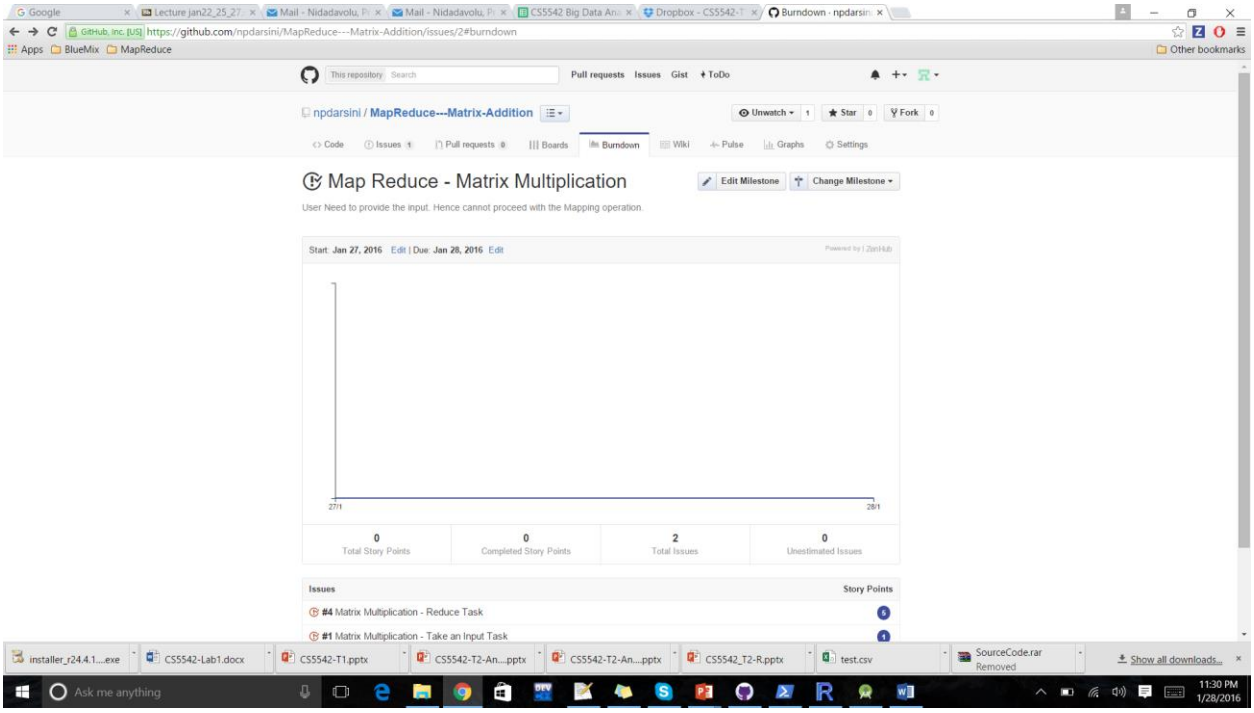
Agile Board

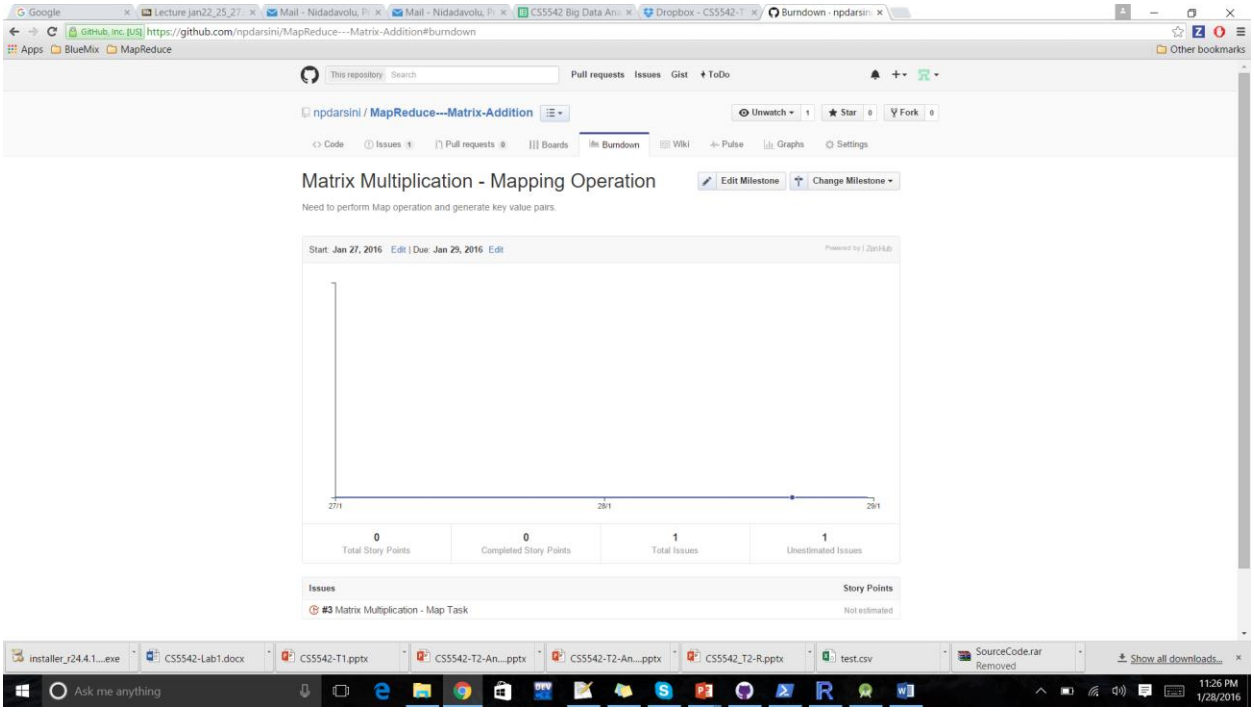

https://github.com/npdarsini/MapReduce---Matrix-Addition/issues/4#boards?repos=50601116
npdarsini / MapReduce---Matrix-Addition
New Issues
Backlog
To Do
In Progress
Done
Closed
Matrix Multiplication - Result Display
Matrix Multiplication - Reduce Task
Matrix Multiplication - Map Task
Matrix Multiplication - Validate whether they can be added.
Matrix Multiplication - Take an Input Task

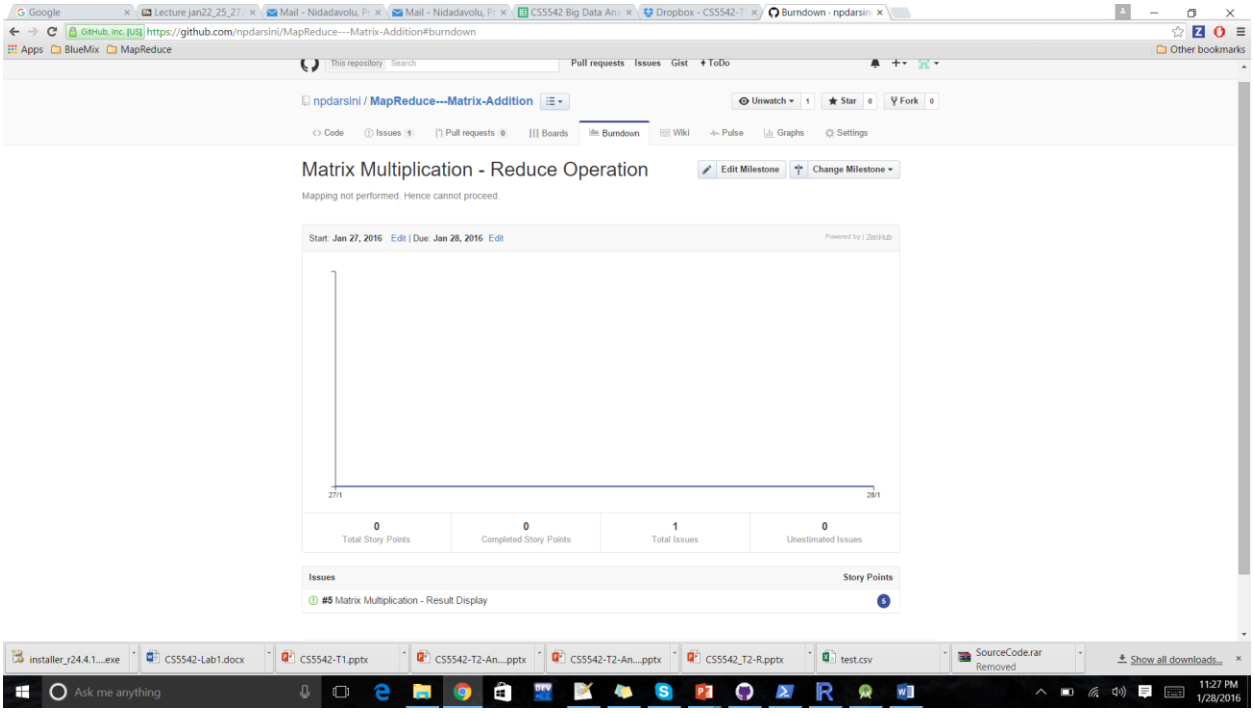
Milestones and burndown charts:






https://github.com/npdarsini/MapReduce---Matrix-Addition/issues/2#burndown
npdarsini / MapReduce---Matrix-Addition
Map Reduce - Matrix Multiplication
User Need to provide the input. Hence cannot proceed with the Mapping operation.
Start: Jan 27, 2016 Edit | Due: Jan 28, 2016 Edit
0 Total Story Points
0 Completed Story Points
2 Total Issues
0 Unestimated Issues
Issues
Story Points
#4 Matrix Multiplication - Reduce Task
#1 Matrix Multiplication - Take an Input Task


https://github.com/npdarsini/MapReduce---Matrix-Addition#burndown
npdarsini / MapReduce---Matrix-Addition
Matrix Multiplication - Mapping Operation
Need to perform Map operation and generate key value pairs.
Start: Jan 27, 2016 Edit | Due: Jan 29, 2016 Edit
0 Total Story Points
0 Completed Story Points
1 Total Issues
1 Unestimated Issues
Issues
Story Points
#3 Matrix Multiplication - Map Task


https://github.com/npdarsini/MapReduce---Matrix-Addition#burndown
npdarsini / MapReduce---Matrix-Addition
Code
Issues 5
Pull requests 0
Boards
Burndown
Wiki
Pulse
Graphs
Settings
Matrix Multiplication - Reduce Operation
Edit Milestone
Change Milestone
Mapping not performed. Hence cannot proceed.
Start: Jan 27, 2016 Edit | Due: Jan 28, 2016 Edit
27/1
28/1
0
Total Story Points
0
Completed Story Points
1
Total Issues
0
Unestimated Issues
Issues
Story Points
#5 Matrix Multiplication - Result Display
5