Report for Lab Assignment 1

1.

QUESTION:

Write a map-reduce pseudo code for Sum of Two Matrices.

$$\mathbf{A}+\mathbf{B} = \begin{bmatrix} a_{11} & a_{12} & \cdots & a_{1n} \\ a_{21} & a_{22} & \cdots & a_{2n} \\ \vdots & \vdots & \ddots & \vdots \\ a_{m1} & a_{m2} & \cdots & a_{mn} \end{bmatrix} + \begin{bmatrix} b_{11} & b_{12} & \cdots & b_{1n} \\ b_{21} & b_{22} & \cdots & b_{2n} \\ \vdots & \vdots & \ddots & \vdots \\ b_{m1} & b_{m2} & \cdots & b_{mn} \end{bmatrix}$$

$$= \begin{bmatrix} a_{11}+b_{11} & a_{12}+b_{12} & \cdots & a_{1n}+b_{1n} \\ a_{21}+b_{21} & a_{22}+b_{22} & \cdots & a_{2n}+b_{2n} \\ \vdots & \vdots & \ddots & \vdots \\ a_{m1}+b_{m1} & a_{m2}+b_{m2} & \cdots & a_{mn}+b_{mn} \end{bmatrix}$$

PSEUDO CODE:

```
map(key, value):
    // value is ("A", i, j, a_ij) or ("B", i, j, b_ij)
    i = value[1]
    j = value[2]
    if value[0] == "A":
        a_ij = value[3]
        emit(i, ("A", j, a_ij))
    else:
        b_ij = value[3]
        emit(i, ("B", j, b_ij))


reduce(key, values):
    // key is j
    // values is a list of ("A", i, a_ij) and ("B", k, b_jk)
    list_A = [(j, a_ij) for (M, j, a_ij) in values if M == "A"]
```

list_B = [(j, b_{ij}) for (M, j, b_{ij}) in values if M == "B"]

for (j, a_{ij}) in list_A:

    for (j, b_{ij}) in list_B:

        emit((i, j), a_{ij}+b_{ij})

2.

QUESTION:

Create GitHub Account. Create a repository in remote Github. Clone it to local machine.

Create 2 (Source and Documentation) directories in local github.

Put the document with the pseudo code of question (1) under documentation directory in the local windows Github and sync it to remote Github.

DECRIPTION:

Created a GitHub Account and also repository and followed all the steps mentioned.

3.

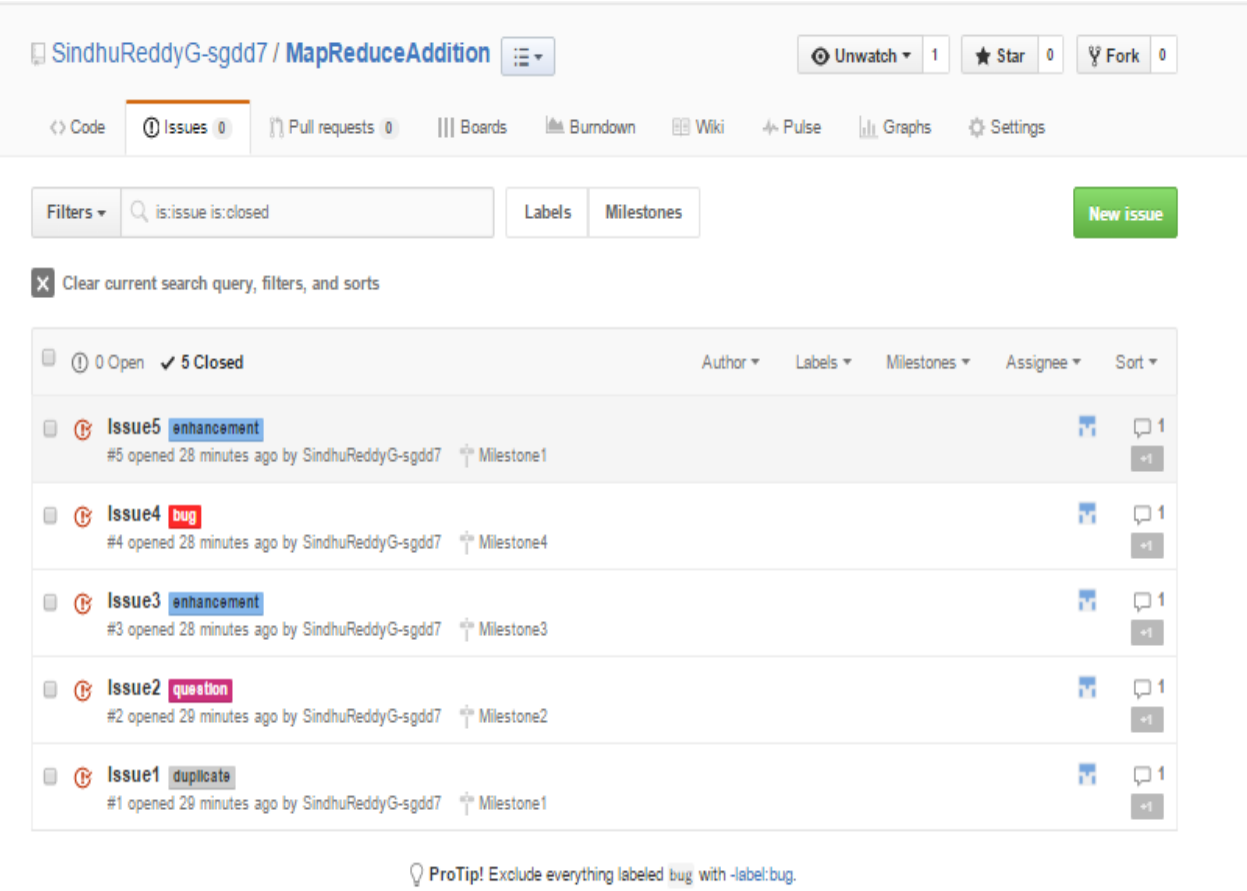
QUESTION:

Create ZenHub Tool Account. Create a board, 3 iterations, at least 5 tasks and show the analytics graph.

DECRIPTION:

Created ZenHub Tool Account and also created a board, 5 Issues and 4 Milestones. Below are the details and Burndown graphs generated for each Milestone.

SCREENSHOTS:



SindhuReddyG-sgdd7 / MapReduceAddition

Unwatch 1 | Star 0 | Fork 0

Code | Issues 0 | Pull requests 0 | Boards | Burndown | Wiki | Pulse | Graphs | Settings

Milestone1

Edit Milestone | Change Milestone

Start: Jan 28, 2016 Edit | Due: Feb 4, 2016 Edit

Powered by | ZenHub

0	0	2	2
Total Story Points	Completed Story Points	Total Issues	Unestimated Issues

Issues	Story Points
#5 Issue5	Not estimated
#1 Issue1	Not estimated

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Unwatch 1 | Star 0 | Fork 0

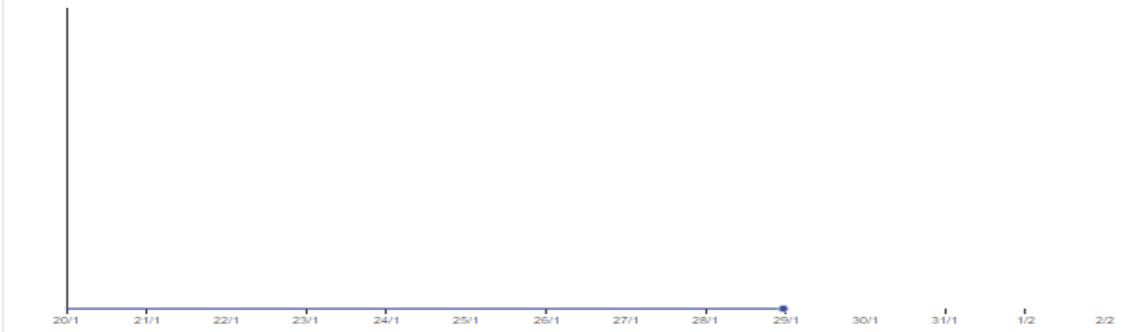
Code | Issues 0 | Pull requests 0 | Boards | Burndown | Wiki | Pulse | Graphs | Settings

Milestone2

Edit Milestone | Change Milestone

Start: Jan 20, 2016 Edit | Due: Feb 2, 2016 Edit

Powered by | ZenHub



0	0	1	1
Total Story Points	Completed Story Points	Total Issues	Unestimated Issues

Issues	Story Points
#2 Issue2	Not estimated

SindhuReddyG-sgdd7 / **MapReduceAddition**

Unwatch 1 | Star 0 | Fork 0

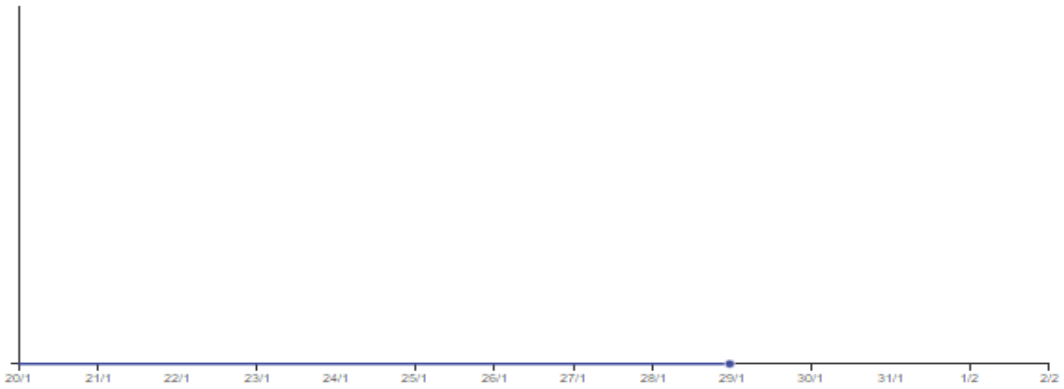
Code | Issues 0 | Pull requests 0 | Boards | Burndown | Wiki | Pulse | Graphs | Settings

Milestone3

Edit Milestone | Change Milestone

Start: **Jan 20, 2016** Edit | Due: **Feb 2, 2016** Edit

Powered by | ZenHub



0	0	1	1
Total Story Points	Completed Story Points	Total Issues	Unestimated Issues

Issues	Story Points
#3 Issue3	Not estimated

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Unwatch 1 | Star 0 | Fork 0

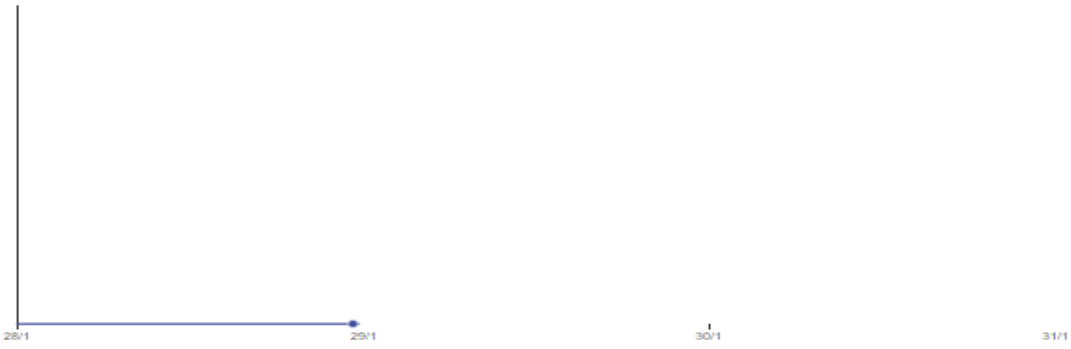
Code | Issues 0 | Pull requests 0 | Boards | Burndown | Wiki | Pulse | Graphs | Settings

Milestone4

Edit Milestone | Change Milestone

Start: **Jan 28, 2016** Edit | Due: **Jan 31, 2016** Edit

Powered by | ZenHub



0	0	1	1
Total Story Points	Completed Story Points	Total Issues	Unestimated Issues

Issues	Story Points
#4 Issue4	Not estimated