Distributed Systems and Cloud Computing Project-1

Team Members:
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Time distribution

• Understanding the overall project and splitting the tasks amongst the team mates. Also explored and decided between MongoDB and Creating classes. – **2Hrs**

• Implemented functionality Part A – **3Hrs**

• Implemented functionality for part B – **2.5Hrs**

• Implemented functionality for part C and minor changes to the existing code - **3Hrs**

• logger and output – **2Hrs**

• Final check and report – **1 Hr**

How to run the code:

The main code resides in p1_main.py file. Download the whole P1 directory and set the current directory to P1 where all the files are present. The commands to be run have to be placed in a .txt file. The name of the file has to be specified at run time. The program takes command from the input file and run the commands sequentially.

URL for Github tree and timestamp:

https://github.tamu.edu/akshay-gh/678-18-c/commits/master/P1
(github log has been pasted at the end of report)

Main Ideas of the design:

1. Classes for racks, machines, instances, images and flavors have been created. Every instance creation creates an object of instance class. Before an instance is created, pre-check is done.
2. To keep track of the instances we have dictionaries of images , flavors, racks, machines, instances. This is updated as we add or remove machines, instances etc.

Implemented Part C:

Had to make changes to the Rack Class and also created Images class for this. Added images stored as a set for keeping track of images associated with rack.

Three functions to take care of this condition:

1) create_instance_with_rack(): creates a list of machines which has images stored locally in the rack

2) create_instance_with_machines(): takes list of machines from (1) and checks if the instance can be created on these machines

3) if (2) is not successful! use create_instance() to try to put instance in machine with available spaces.

How to run

• The code can be run by downloading the compressed folder and uncompressing it.

• All the files should be kept in the same directory.

• Run p1_main.py by executing the command *"python p1_main.py"*

• The program will then ask the user to give the file name where the commands are present.

E.g. if the input file is input-sample-1.txt

When the program asks to input the command file name

Put "input-sample-1.txt" and press enter.

The logs will be logged in aggiestack-log.txt file.

Git logs

commit 50c44c697fd5907fa3787fa19d22db3784978bd4

Author: akshay_gh <akshay_gh@tamu.edu>

Date: Mon Dec 3 20:52:10 2018 -0600

   inputsamplechange

commit c69cd74dffa547f04130cfbf58008c098dcfe3ef

Author: Ronak Chaudhary <ronakchaudhary132199@tamu.edu>

Date: Mon Dec 3 20:16:40 2018 -0600

final changes

Final changes for the code

commit eb1d63bdb6b789a27a7f8e0e37671c99f769dc6a
Author: Ronak Chaudhary <ronakchaudhary132199@tamu.edu>
Date: Mon Dec 3 20:08:08 2018 -0600

   adding the log commands and other changes

commit 36d13a44608edf8177e5cf312312e80bc54bae37
Author: akshay_gh <akshay_gh@tamu.edu>
Date: Mon Dec 3 18:57:16 2018 -0600

   P1 minor edit

commit 88f698a7f2e32b2a8ac1c0642758cc8dc58f770f
Author: Ronak Chaudhary <ronakchaudhary132199@tamu.edu>
Date: Mon Dec 3 17:48:31 2018 -0600

   updated readme

commit 5be7179fdb1fbe44bcce0c22e08dc5c0ddf68d80
Author: Ronak Chaudhary <ronakchaudhary132199@tamu.edu>
Date: Mon Dec 3 17:39:16 2018 -0600

   ReadMe file

commit ae4636bc4d0804490ebca2f401ccd0999ca45c4f
Author: akshay_gh <akshay_gh@tamu.edu>
Date: Sat Dec 1 17:06:29 2018 -0600

   P1-C

commit fbe9b95d986579debbf66e14f224bb92081db437

Author: akshay_gh <akshay_gh@tamu.edu>

Date: Sat Dec 1 02:06:23 2018 -0600

    format changes

commit fb6b56d6bbdc4d26d0fd1a8c61adbf521a67e820

Author: akshay_gh <akshay_gh@tamu.edu>

Date: Fri Nov 30 19:54:55 2018 -0600

    P1

commit 7515f2c41e11352592420ffd6a78d12279fbb021

Author: akshay_gh <akshay_gh@tamu.edu>

Date: Thu Nov 29 00:52:03 2018 -0600

    P0

commit 2d0187d7687518049ef9db7e4f60164f9bace3c9

Author: nikhila-sr <nikhila_sr@tamu.edu>

Date: Tue Nov 27 21:30:49 2018 -0600

    added last 3 functions of part A in pdf

commit c6e6b9dd977ad8ebd4aaf82932e40b1ebb3871f5

Merge: d85f34a a3fceb1

Author: nikhila-sr <nikhila_sr@tamu.edu>

Date: Tue Nov 27 21:03:13 2018 -0600

    Merge branch 'master' of https://github.tamu.edu/akshay-gh/678-18-c

commit d85f34abfa438d88f6d6e57f7d07f4143871879c

Author: nikhila-sr <nikhila_sr@tamu.edu>

Date: Tue Nov 27 21:03:00 2018 -0600

    added first 2 funcs in pdf

commit a3fceb11aa42ea445b8c69bf005572bf4fe8d407
Author: akshay_gh <akshay_gh@tamu.edu>
Date: Tue Nov 27 20:18:06 2018 -0600

    docopt

commit 4bdfacfb34676f909daef02e7557cea9f52ccd83
Merge: 89479bb 77be7ef
Author: nikhila-sr <nikhila_sr@tamu.edu>
Date: Mon Nov 26 21:18:11 2018 -0600

    merging readhwconfig function Merge branch 'master'
    of https://github.tamu.edu/akshay-gh/678-18-c

commit 89479bb4e2b9a4482a5f1d940342ae61f27b5504
Author: nikhila-sr <nikhila_sr@tamu.edu>
Date: Mon Nov 26 21:14:59 2018 -0600

    added function to read hwconfig into dictionary

commit 77be7ef317135f36cc7261b0fd502aa46443a72e
Author: S.R.Nikhila <nikhila_sr@tamu.edu>
Date: Sun Nov 18 12:14:48 2018 -0600

    Delete p1_main.pdf

commit 2cabc8a84429902504ce1fb93ec452dd7e97d46a
Author: nikhila-sr <nikhila_sr@tamu.edu>
Date: Sun Nov 18 03:02:03 2018 -0600

    deleted .pdf

commit 8a73235b2f951658ba48c888dde781ae0133f2f2

Author: nikhila-sr <nikhila_sr@tamu.edu>

Date: Sun Nov 18 03:01:10 2018 -0600

    created classes for machines and instances, function for read_flavors

commit fbfce0744c3a56ba755beeb71de9b519e48db106

Author: nikhila-sr <nikhila_sr@tamu.edu>

Date: Sun Nov 18 00:49:02 2018 -0600

    created classes for machine and instance

commit f53205cd812fba61855d51ed37c5602d65813b32

Author: nikhila-sr <nikhila_sr@tamu.edu>

Date: Sat Nov 17 23:33:37 2018 -0600

    adding config files