1 User Interface Module

1.1 Test Plan

Features to be tested.

1. Adding VM
2. Deleting VM
3. Switching off PM
4. Switching on PM
5. consolidating the VM's

1.2 Test cases

1.2.1 Adding VM

addVM-1:Adding VM when VM capacity is greater than residual capacity in a PM

Purpose	: To check the functionality of addVM() when sufficient space is not available in PM
Input	: capacity of VM and VM ID for the VM to be added
Expected output	: The error number related to insufficient residual capacity is returned
Test Procedure	: addVM() function is called with VM capacity greater than the residual capacity in the first PM

addVM-2:Adding VM when VM capacity is less than or equal residual capacity in a PM

Purpose	: To check the functionality of addVM() when sufficient space is available in PM
Input	: capacity of VM and VM ID for the VM to be added
Expected output	: The VM will be added to any of the available PM's and it will be reflected in GUI
Test Procedure	: addVM() function is called with VM capacity less than or equal to the residual capacity in any PM

1.2.2 Deleting VM

deletVM-1:Deleting VM

Purpose	: To check the functionality of deleteVM when valid input it given
Input	: VM ID of the VM to be deleted
Expected output	: The VM will be deleted and it will be reflected in GUI
Test Procedure	: deleteVM() function is called with VM ID of the VM to be deleted

1.2.3 Switching off PM

switchOffPM-1: Switching off PM when VM's in a specific PM can be consolidated in other PM's

Purpose	: To check the functionality of switchOffPM when VM's in a specific PM can be consolidated in other PM's
Input	: PM ID of the PM to be switched off
Expected output	: The PM will be switched off and it will be reflected in GUI
Test Procedure	: switchOffVM() function is called on a filled PM when all other PM's are empty

switchOffPM-2: Switching off PM when VM's in a specific PM cannot be consolidated in other PM's

Purpose	: To check the functionality of switchOffPM when VM's in a specific PM cannot be consolidated in other PM's
Input	: PM ID of the PM to be switched off
Expected output	: The PM will not be switched off and corresponding error message will be returned
Test Procedure	: switchOffVM() function is called on a filled PM when all other PM's are almost full

1.2.4 Switching on PM

switchOnPM-1: Switching on a PM with was switched off

Purpose	: To check the functionality of switchOnPM function
Input	: PM ID of the PM to be switched on
Expected output	: The PM will be switched on and it will be reflected in GUI
Test Procedure	: switchOnPM() function is called on a PM in off state

1.2.5 consolidate

consolidate-1: check the operation of consolidation function when all PM's except one are empty

Purpose	: To check the operation of consolidation function when all PM's except one are e
Input	: NONE
Expected output	: An error code saying no need of consolidation will be sent
Test Procedure	: consolidate() function will be called keeping all PM's except one empty.

consolidate-2: check the operation of consolidation function when all the PM's are filled and we can empty atleast one PM

Purpose	: To check the operation of consolidation function when all the PM's are filled and we can empty at least one PM
Input	: NONE

Expected output	: PM's will be consolidated such that at least one will be emptied completely
Test Procedure	: consolidate() function will be called with a configuration such that emptying atleast one PM completely is possible .

consolidate-3: check the operation of consolidation function when all the PM's are filled and none of the PM can be completely emptied

Purpose	: To check the operation of consolidation function when all the PM's are filled and none of the PM can be completely emptied
Input	: NONE
Expected output	: error message will be returned which tells consolidation is not possible
Test Procedure	: consolidate() function will be called with a configuration such that emptying atleast one PM completely is not possible.