

# Submission Worksheet

## Submission Data

**Course:** IT490-451-M2025

**Assignment:** IT490 MQ Test Individual

**Student:** Pavan P. (pjp22)

**Status:** Submitted | **Worksheet Progress:** 100%

**Potential Grade:** 10.00/10.00 (100.00%)

**Received Grade:** 0.00/10.00 (0.00%)

**Started:** 6/10/2025 4:20:18 PM

**Updated:** 6/10/2025 5:16:57 PM

**Grading Link:** <https://learn.ethereallab.app/assignment/v3/IT490-451-M2025/it490-mq-test-individual/grading/pjp22>

**View Link:** <https://learn.ethereallab.app/assignment/v3/IT490-451-M2025/it490-mq-test-individual/view/pjp22>

## Instructions

- Walkthrough: <https://youtu.be/tgT0ZAxccbQ>
- 1. Read all instructions and requirements first
- 2. Use any VM creation tool that gives you root access and persistent storage
  - VirtualBox, Multipass, cloud (Amazon, Google, Azure, etc) (Docker won't be an option here)
  - Create a hostname relevant to the assignment (i.e., test-individual)
  - Create a user of your ucid with a password, ensure relevant permissions
  - Hardware: 1GB Memory, 10GB Hard Drive
  - Install a server version of linux (i.e., Ubuntu Server 24.04)
  - Hint: You may want to get a base install working and use that as a cloning point for quicker destroy/create cycles
- 3. Use the example code from the master branch of <https://github.com/MattToegel/IT490>
- 4. Connect to the VM with two separate ssh connections
  - Run the RabbitMQServerSample.php file successfully in one instance
  - Run the RabbitMQClientSample.php file successfully in another instance
  - Proper data should be sent/received
- 5. Create a setup.sh script that automates the installation/setup logic
- 6. Fill in the below requirements
- 7. Submit and Export once done
- 8. Upload the PDF to your personal GitHub repo for the class
- 9. Upload the PDF to Canvas

## Section #1: ( 7 pts.) Example Solution

Progress: 100%

### ≡ Task #1 ( 3.50 pts.) - Working Example

Progress: 100%

#### Part 1:

**Details:**

- Demonstrate a successful send/receive of the example message
- Hostname should be test-individual or similar
- Username should be your ucid

```

#!/usr/bin/perl

use strict;
use warnings;

my $host = "test-individual";
my $user = "your-ucid";

my $cmd = "echo 'Hello, World!'";

my $ssh_cmd = "ssh -i /path/to/private-key $user@$host $cmd";

my $output = `ssh -i /path/to/private-key $user@$host $cmd`;

print "Output: $output\n";

```

client sending and receiving.

```

#!/usr/bin/perl

use strict;
use warnings;

my $host = "test-individual";
my $user = "your-ucid";

my $cmd = "echo 'Hello, World!'";

my $ssh_cmd = "ssh -i /path/to/private-key $user@$host $cmd";

my $output = `ssh -i /path/to/private-key $user@$host $cmd`;

print "Output: $output\n";

```

server consuming and replying.



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**Part 2:****Details:**

- Detail the initial setup experience and note things you had to address in order for the example to work

**Your Response:**

I started off with setting up the virtual machine and installed necessary updates. Then I installed necessary things like php, composer, rabbitmq-server, net-tools, openssh. I enabled ssh. I closed the github repo and made necessary changes to the files. then I ssh from host pc's terminal to VM. then i successfully loaded the client and server rabbitmq files.



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**Task #2 ( 3.50 pts.) - Setup Script****Part 1:**

## Part 1:

Progress: 100%

### Details:

- Show a snippet of the `setup.sh` script you created to automate the installation and configuration steps that lead up to a working example.

```
GNU nano 2.9.2 /tmp/nano
# /bin/bash
echo "Updating system"
sudo apt install -y sudo apt upgrade -y
echo "Installing packages"
sudo apt install -y php composer rabbitmq-server net-tools openssh-server git
echo "Starting ssh"
sudo systemctl enable ssh
sudo systemctl start ssh
sudo systemctl status ssh
REPO_DIR=$(pwd)
REPO_URL="https://github.com/pavanpatel18/IT490_Test_Individual_Solo.git"
if [ -d "$REPO_DIR" ]; then
    echo "Repository already exists, skipping clone."
else
    echo "Cloning IT490 repo from $REPO_URL"
    git clone "$REPO_URL"
fi
echo "Running composer in the project"
cd IT490
composer update
composer install
echo "Setup completed"
```

setup script steps



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## Part 2:

Progress: 100%

### Details:

- Include the direct link to the file from your personal class repository

URL #1

[https://github.com/pavanpatel18/IT490\\_Pavan\\_Patel/blob/main/IT490\\_Test\\_Individual\\_Solo/setup.sh](https://github.com/pavanpatel18/IT490_Pavan_Patel/blob/main/IT490_Test_Individual_Solo/setup.sh)



URL

[https://github.com/pavanpatel18/IT490\\_Pavan\\_Patel/blob/main/IT490\\_Test\\_Individual\\_Solo/setup.sh](https://github.com/pavanpatel18/IT490_Pavan_Patel/blob/main/IT490_Test_Individual_Solo/setup.sh)



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## Part 3:

Progress: 100%

### Details:

- Briefly explain each step of the process in the script

Your Response:

step 1: updates the system step 2: installs packages like php, composer, rabbitmq-server, net-tools, openssh-server, and git step 3: enables and starts ssh step 4: checks if the IT490 repo exists. if not, it clones the IT490 repo. step 5: opens the directory and updates and install composer.



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## Section #2: ( 2 pts ) Reflection

## Section #2: ( 3 pts.) Reflection

Progress: 100%

⇒ Task #1 ( 1 pt.) - What was the easiest part of this assignment

Progress: 100%

**Details:**

- At least a few solid sentences

Your Response:

easiest part of the assignment was ssh from host pc to VM. I just have to get the ip address of VM and write command in host pc terminal to ssh into the VM.



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⇒ Task #2 ( 1 pt.) - What was the hardest part of this assignment

Progress: 100%

**Details:**

- At least a few solid sentences

Your Response:

hardest part of the assignment for me was making oracle virtual-box work. I initially used macOS as host PC for this assignment. but later I ended up using my windows laptop since the MacOS was giving me more issues and it's more reliable to use windows for this class to avoid potential issues later on during this course.



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⇒ Task #3 ( 1 pt.) - What did you learn during this assignment

Progress: 100%

**Details:**

- At least a few solid sentences

Your Response:

during this assignment I learned about openssh since I had to install it into VM in order

for me to ssh from host pc to VM.



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