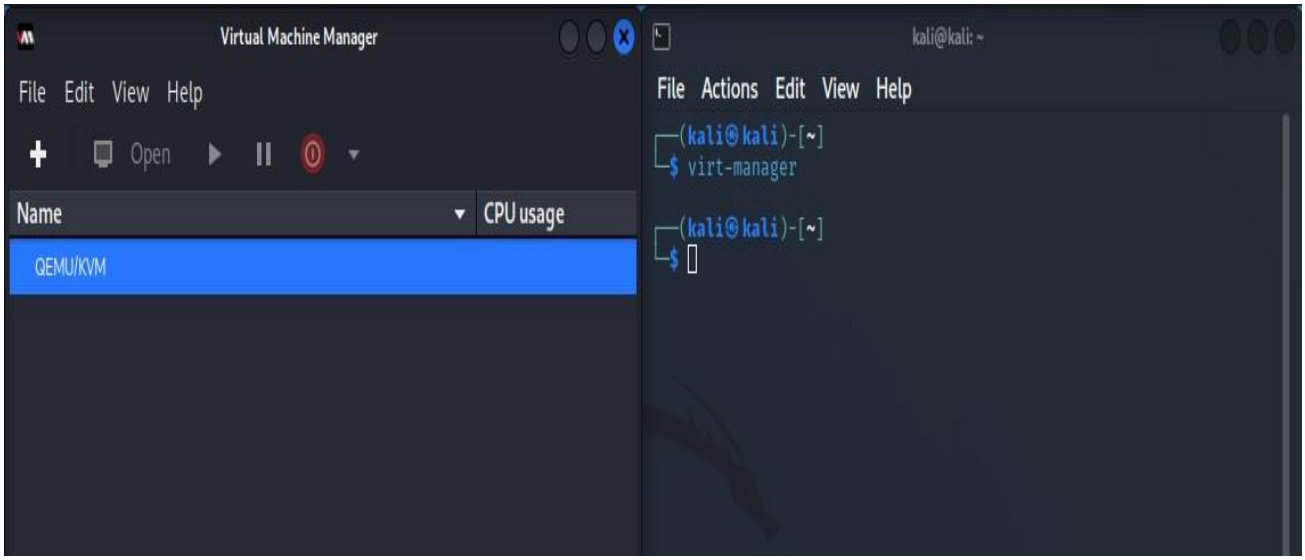
Practical 5

Aim: INSTALLATION AND CONFIGURATION OF VIRTUALIZATION USING KVM

COMMANDS:

1.sudo grep-c"svm\|vmx"/proc/cpuinfo
2.sudo apt install qemu-kvm libvirt-daemon-system virt-manager brid
3.sudo apt-get update
4.sudo apt-get install qemu-kvm libvirt-daemon-system virt-manager bridge-utils
5.sudo apt install qemu-kvm libvirt-clients libvirt-daemon-system bridge-utils
6.sudo systemctl start libvirtd
7.sudo usermod -aG kvm $USER
8.sudo systemctl is-active libvirtd
9.sudo usermod -aG libvirt $USER
sudo usermod -aG kvm $USER
10.virt-manager
11.kvm-ok

OUTPUT:



Practical 6

Aim: application to download image/video from server or upload image/video to server using MTOM techniques

(node.js) code:

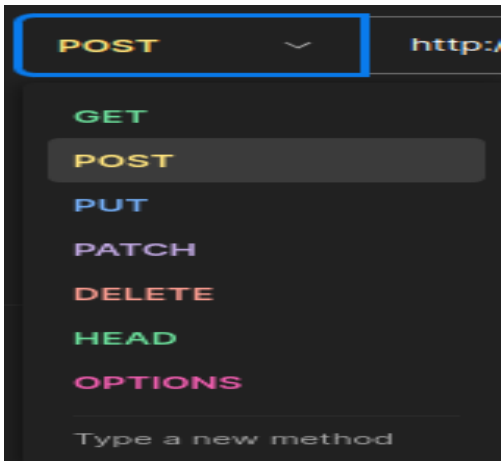
```
const express = require('express');
const multer = require('multer');
const path = require('path');
const fs = require('fs');
const app = express();
const port = 3000;
// Define storage using multer.diskStorage
const storage = multer.diskStorage({
  destination: (req, file, cb) => {
    // Set the destination folder where the file will be saved
    const uploadFolder = 'uploads';
    fs.mkdirSync(uploadFolder, { recursive: true });
    cb(null, uploadFolder);
  },
  filename: (req, file, cb) => {
    // Set the filename to the original filename
    cb(null, file.originalname);
  },
});

const upload = multer({ storage: storage });
app.post('/upload', upload.single('file'), (req, res) => {
  const file = req.file;
  // Check if file is present
  if (!file) {
    return res.status(400).json({ success: false, message: 'No file uploaded.' });
  }
  // Process the file as needed (save to disk, database, etc.)
  res.json({ success: true, message: 'File uploaded successfully.' });
});
app.get('/download/:filename', (req, res) => {
  const filename = req.params.filename;
  const filePath = path.join(__dirname, 'uploads', filename);
  // Check if file exists
  if (fs.existsSync(filePath)) {
    // Implement logic to send the file as a response
    res.sendFile(filePath);
  } else {
    res.status(404).json({ success: false, message: 'File not found.' });
  }
});
app.listen(port, () => {
```

```
console.log(Server is running on http://localhost:${port});});
```

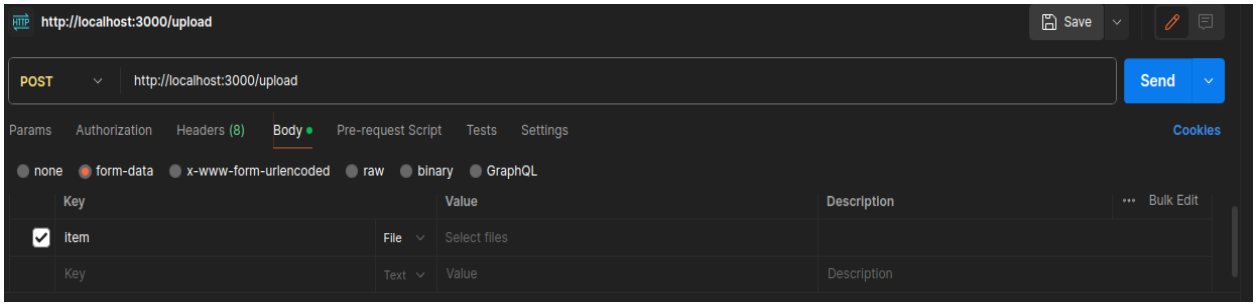
RUN THE CODE: IT WILL START THE SERVER AT localhost:3000

OPEN POSTMAN OPEN A NEW PAGE & CHOOSE POST METHOD

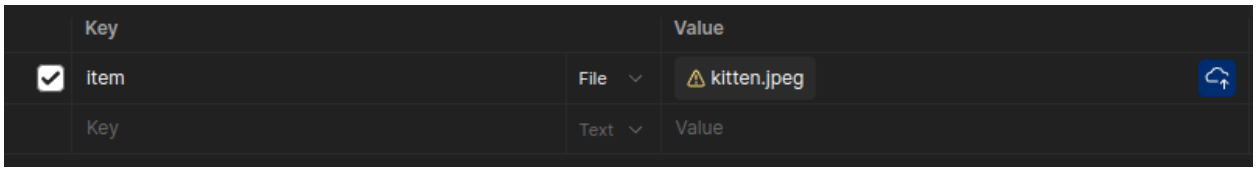


ENTER THE URL OF THE SERVER: http://localhost:3000/upload

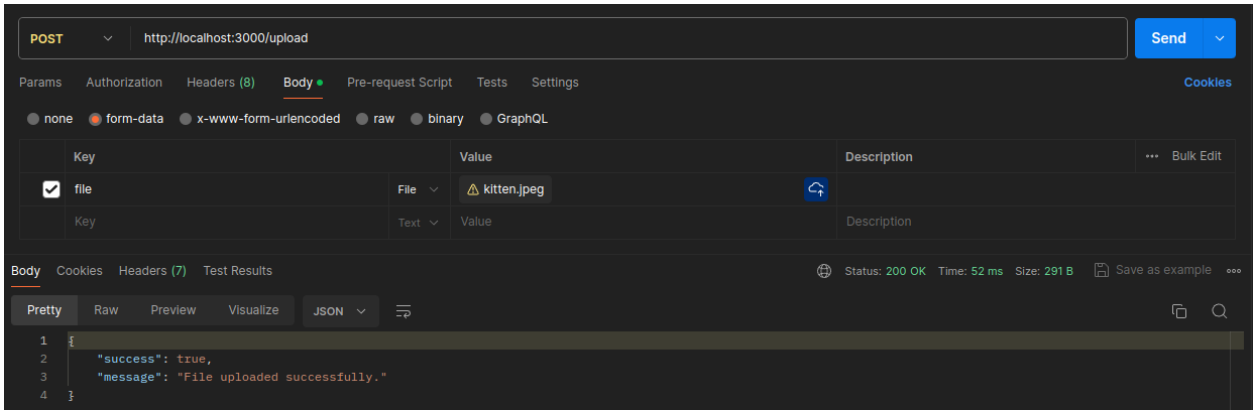
THEN CLICK ON BODY>FORM DATA>NAME THE KEY ITEM AND FILE TYPE: FILE



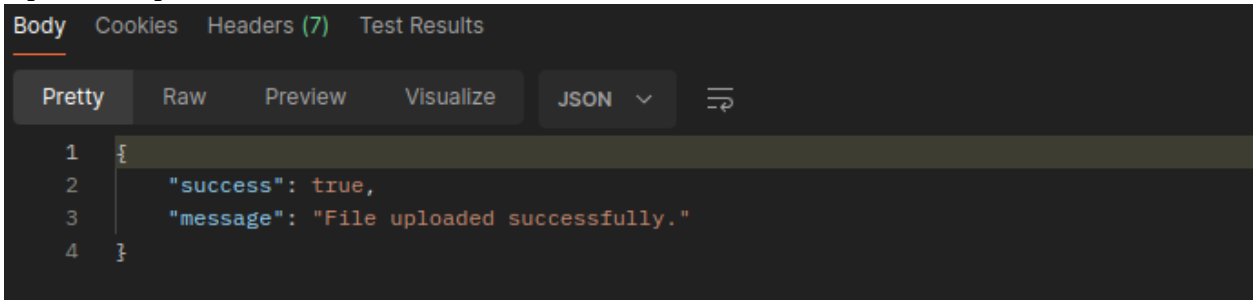
IN VALUE TAB ENTER THE FILE YOU WANT TO UPLOAD TO THE SERVER



CLICK ON SEND

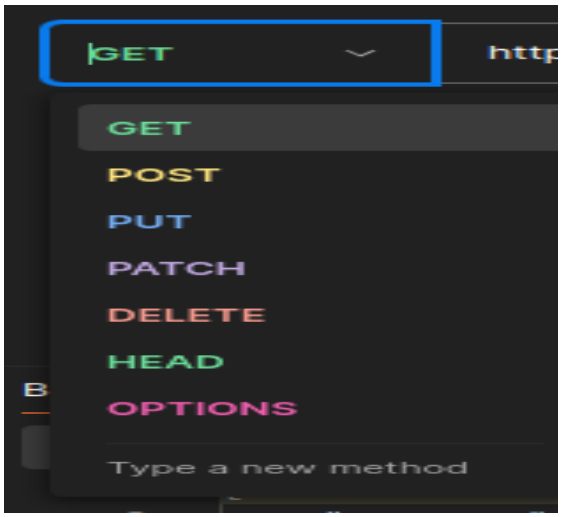


Upload Output:

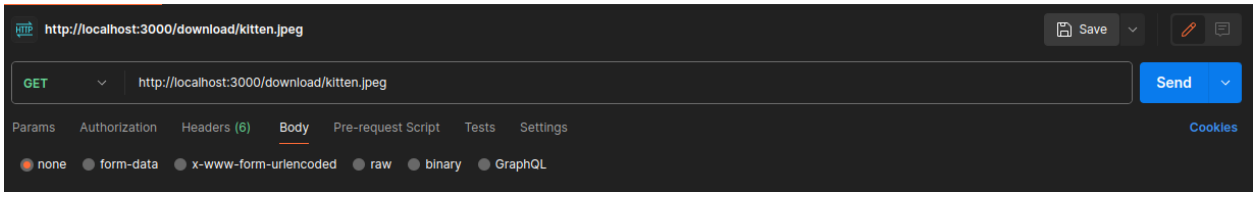


DOWNLOAD:

CHOOSE GET METHOD

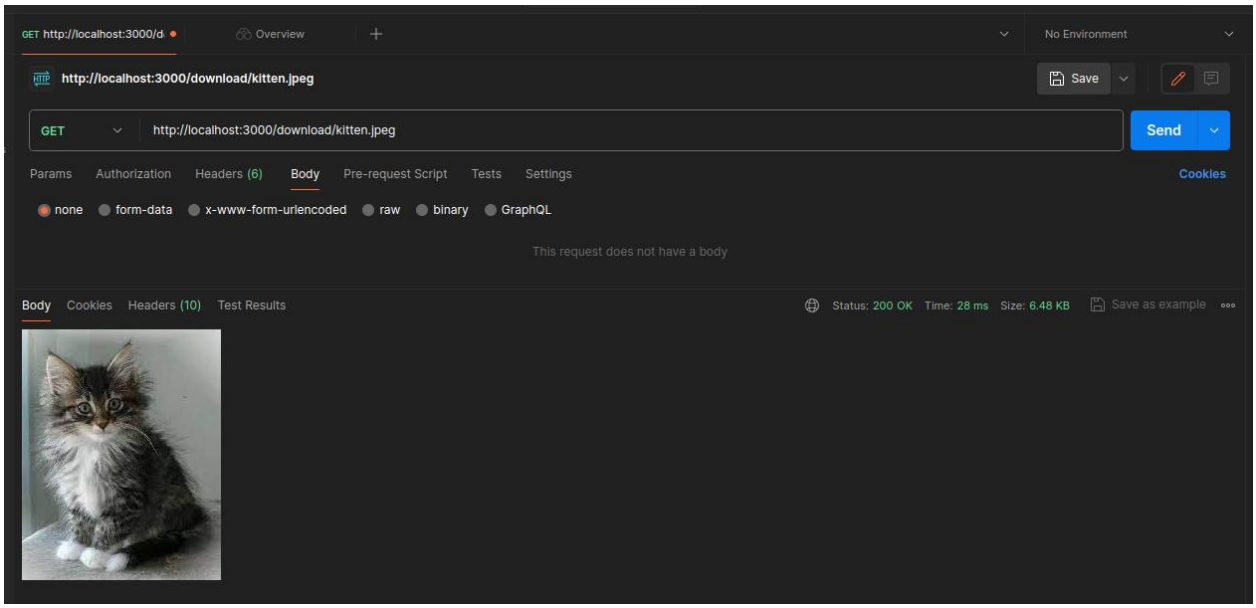


ENTER THE URL OF THE SERVER: http://localhost:3000/download/kitten.jpg



CLICK ON SUBMIT

DOWNLOAD OUTPUT :



Practical 7

Aim :Cloud Functionality VSI (Virtual Server Infrastructure) Infrastructure as a Service (IaaS), Storage

AFTER INSTALLATION, IT WILL SHOW YOU AN IP ADDRESS. PUT IT IM YOUR BROWSER TO ACCESS YOUR ADMINISTRATOR PAGE THE DEFAULT USER CREDENTIALS ARE USER: ADMIN AND PASSWORD: ADIMIN. FOR ROOT LOGIN - USERNAME- ROOT AND PASSWORD - PASSWORD.

THE FIRST SCREEN AFTER LOGIN SHOWS MANY OPTIONS TO INSTALL AND DEPLOY ANY VIRTUAL MACHINE. TO INSTALL A VIRTUAL MACHINE CLICK ON VIRTUAI MACHINE-> UPLOAD ISO FILE OPTION AND UPLOAD THE

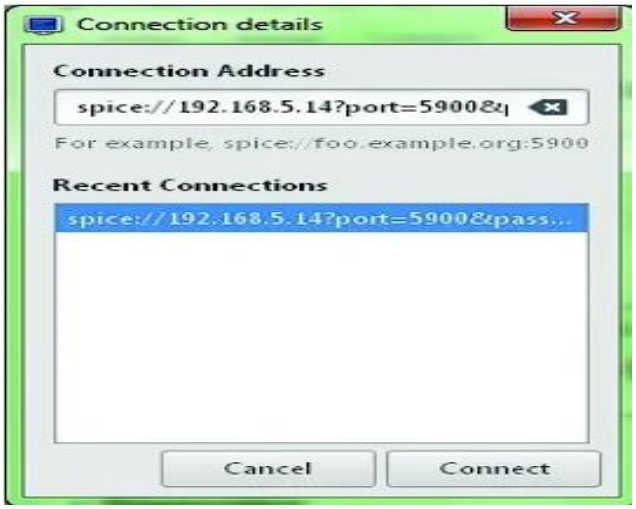
BOOTABLE ISO FILE. HERE, WE ARE GOING TO UPLOAD LINUX ELEMENTARY 0S IS0.

ONCE YOU UPLOADED THE FILE, CREATE VIMTEMPLATE. IN THIS OPTION YOU ARE BASICALLY CONFIGURING YOUR VIRTUAL MACHINE'S STORAGE LOCATION, CPU, MEMORY, NODE ETC. HERE, YOU WILL FIND SINGLE NODES ANA VW PO01 1 RESPECTIVE OPTIONS BECAUSE EVERYTHING WAS INSTALLED AT THE SINGLE SERVER.

NOW, CLICK ON VMTEMPLATES AND YOU WILL SEE A TEMPLATE WHICH YOU HAVE CREATED IN STEP 4. TO START YOUR MACHINE GO TO RUN ACTION TAB AND CLICK ON THE GREEN ARROW. UNDER STATUS TAB, IT SHOWS THE RUNNING TEXT WITH THE GREEN CIRCLE WHICH SHOWS THAT YOUR MACHINE IS RUNNING WITHOUT ANY ERRORS. TO VIEW YOUR VIRTUAL MACHINE CLICK ON A BLUE SQUARE BOX UNDER ACTION TAB.

TO VIEW YOUR VIRTUAL MACHINE YOU HAVE TO DOWNLOAD SPICE CLIENT TOOL. THE DOWNLOAD LINK CAN BE FOUND UNDER THE LINKS OPTION. AFTER DOWNLOADING THE APPLICATION, CLICK ON THE BLUE SQUARE TO VIEW MACHINE. WHEN YOU CLICK ON IT, THE BROWSER WILL POP-UP FOR LAUNCHING THE APPLICATION.

IF THE APPLICATION DOES NOT LAUNCH AUTOMATICALLY, LAUNCH IT MANUALLY BY ENTERING THE LINK AND PASSWORD IN THE REMOTE VIEWER TOOL WHICH YOU WILL SEE IN THE POP-UP MESSAGE.



ONCE IT CONNECTS, ENTER THE PASSWORD WHICH WAS GIVEN IN THE LINK AND CLICK OK.

FINALLY YOU WILL ABLE TO VIEW AND CONTROL YOUR VIRTUAL MACHINE.