

SUMMER PROJECT(JUNE/2020)

PROJECT TITLE : ALERT BASED CHEATING DETECTION SYSTEM FOR PRACTICAL LAB EVALUATIONS .

PROJECT PURPOSE :

The main purpose of this application is to constantly track the unexpected activities of the students performing the test in the Computer Labs in offline mode eg: Programming based evaluations etc . In short it can be used to stop copying during the Time of Tests .

BRIEF OVERVIEW :

This software can be useful for proper lab test evaluations . As It constantly monitors the Activity of all the participating students . It prevents two major mediums of copying during the test interval .

1. INTERNET ACCESS DETECTION / LAN TRANSFER .

2. HARDWARE DETECTION(USB-PLUG-IN/OUT) .

As soon as any of the above Activity is detected on any machine then the system immediately alerts the administrator with the audio message to warn him/her about the activity .

After this , the corresponding information of the machine is also updated on the administrator's computer with respective IP , MAC , HOSTNAME and 2 other parameters .

1. Network-Activity Status :

2. USB-Plugins Status :

This information can be used by the Administrator to identify the operating Machines .

After Test completion the whole report containing the proper status of all the Machines are saved on admin PC.

TECHNICAL DETAILS :

Technically It's an API handling and processing all the requests received from All the active LAN machines Asynchronously .

As soon as any activity is detected like Network Access or the usb Plug-in(Hardware) from any machine a http post request is compiled with all status and sent to the server which is reflected on the Admin Gui.

TECHNOLOGY STACK :

I mainly used the Python programming language to support all the Programming and Networking operations .

DJANGO FRAMEWORK FOR SERVER SIDE HANDLING AND GUI.

SQL BASED DATABASE FOR STORING THE STUDENT INFORMATION .

TKINTER FOR DEVELOPING THE CLIENT SIDE GUI(INTERFACE) .

SOCKET PROGRAMMING FOR MONITORING PURPOSE AT CLIENT SIDE
USING SCAPY(PACKET MONITORING/NETWORKING) , PYUDEV(USB
MONITORING) MODULE AND REQUESTS MODULE FOR HTTP
COMMUNICATIONS WITH API .