



Bhoj Reddy Engineering College for Women

(Sponsored by Sangam Laxmibai Vidyapeet, approved by AICTE and affiliated to JNTUH)
Vinaynagar, IS Sadan Crossroads, Saidabad, Hyderabad – 500 059, Telangana. www.brecw.ac.in



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Report on three-day workshop on “Python”

CSE Department has organized a three-day workshop on “Python” for III BTech CSE A and B students during 24-26 November 2022. 127 students got registered for this workshop. The workshop was scheduled from 09:30 to 16:30 Hrs. The workshop was conducted by Brainovision, Hyderabad.

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Department of Computer Science and Engineering
A Three-day Workshop for III B Tech, CSE A and B Students

PYTHON WORKSHOP
2 Days Workshop + 1 Day Hackathon

Conducted by Brainovision Solutions India Private Limited,
Hyderabad.

24 - 26 November 2022
09:30AM - 16:30 PM
CSE LAB-I (SB-111)
CSE LAB-II (SB-114)
CSE LAB-III (SB-115)

Day-I (24 November 2022)

The first day (24 November 2022) started with an inaugural session, inaugurated by the chief guest Dr V Uma Rani, Professor, JNTUH. The inaugural session was attended by Principal, Vice Principal, Academic Head, CSE-HOD, Workshop in-charge, resource persons from Brainovision, CSE faculty and III CSE A and B students. The venue was WB-402 (Seminar Hall-II). The chief guest Dr V Uma Rani has given an overview of Python to the students.



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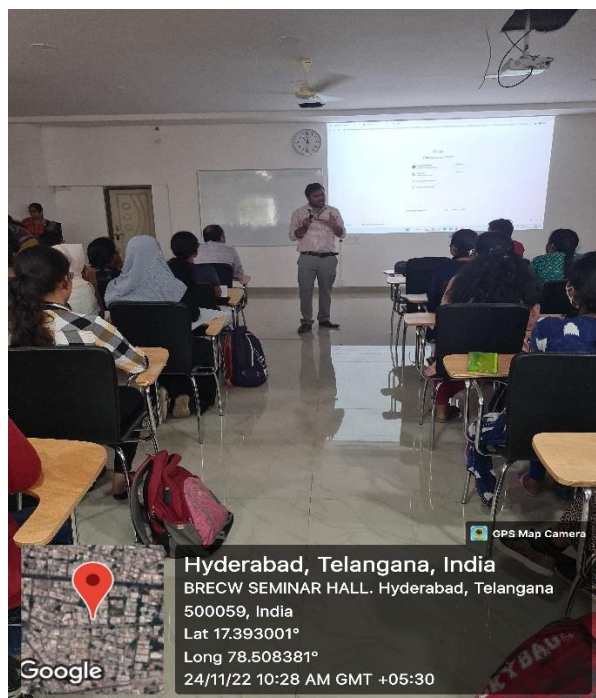


Chief guest Dr V Uma Rani Professor, JNTUH is presenting.

The details of first day are as follows:

Day-I Forenoon Session:

The first day forenoon session of the workshop was dealt with the basics of the Python, SQL Server Database connectivity with Python and Django framework.



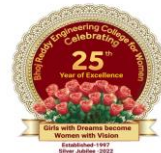
The resource person from Brainovision is presenting.



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The following are the details of day-1 forenoon session:

Python

1. It is a high level language.
2. It can be executed on many operating systems like windows, ubuntu etc.

SQL Server Database

1. It is a Microsoft Product.
2. Structured means, it is a combination of rows and columns.
3. All the tables are stored as pages (8kb size) in the database. A page in SQL Server is always 8kb in size. Actually 1 KB is 1024 bytes. Whenever we write data it first sends to the 8 Kb page it is called a chunk of data stores and then read it from there.
4. When crores of rows are available in a table, then indexes are used to retrieve data very fast. Indexes are of 2 types. Clustered, non clustered.
5. Developer Database – it is used by the software development team.
6. Testing Database – it is used by the software testing team.
7. Production Database – This is the original database which will be accessed by the customers.
8. Restoring Database: Storing the database from one system into another system is known as restoring database.
9. OLTP - Online transaction processing captures, stores, and processes data from transactions in real time. It is an online database modifying system. OLTP systems are designed to handle large volumes of transactional data involving multiple users.
10. OLAP- Online analytical processing uses complex queries to analyze aggregated historical data from OLTP systems. It is an online database query answering system. It is data mining, and reporting tool used in Business Intelligence to make data work for end-users.
11. DDL – Data Definition Language.
12. DCL – Data Control Language.
13. TCL – Transaction Control Language.
14. New Query - Create database students; - Execute or F5.
15. Select all – Right Click – Save it as emp.xls - Note: select all files.



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Django

1. Django is a python framework that makes it easier to create web sites using python.
2. MVT-Model View Template is software design pattern for developing a web application.
3. A Django project when initialized contains basic files by default such as
 1. manage.py
 2. _init_.py
 3. .settings.py
 4. .urls.pyetc.

Pre-Requisites

1. Windows 10 or above
2. Python Installation 3.11.0
3. Visual Studio Code Installation
<https://code.visualstudio.com/download>
4. SQL Server Database
<https://www.microsoft.com/en-in/sql-server/sql-server-downloads>
download either Developer version or Express version
Install SSMS - SQL Server Management Studio as well.
Free Download for SQL Server Management Studio (SSMS) 18.12.1
Server name is by default your system name.

Cloud Computing:

Cloud platforms are
Microsoft Azure
AWS – Amazon Web Services

Software Development – It involves coding.

Software Testing – It involves testing the code for 1 lakh or more customers.

Software Deployment – DevOps comes under this. It involves checking the project as the Real Time customers can access or not. It is working properly or not.

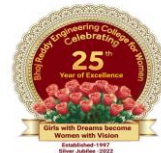
Day-I Afternoon Session

The afternoon session was Hands-on session where students implemented a helloworld program using Django framework.



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The program details are as follows:

Steps to write a hello world program in Python with Django

1. Create a folder on desktop.

Ex.: CSE

2. `c:\Users\CSE-Lab-I\Desktop\CSE>pip install virtualenvwrapper-win`

3. Create Virtual Environment with the following command

```
c:\Users\CSE-Lab-I\Desktop\CSE>mkvirtualenv myvirtual
```

```
(myvirtual) c:\Users\CSE-Lab-I\Desktop\CSE>
```

Note:- To activate use command `workon myvirtual`

or `Virtual Environment Name\scripts\activate`

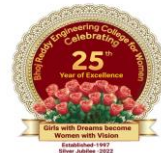
To deactivate use command `deactivate`

4. `(myvirtual) c:\Users\CSE-Lab-I\Desktop\CSE>pip install django`
5. `(myvirtual) c:\Users\CSE-Lab-I\Desktop\CSE>django-admin startproject Welcome_project`
6. `(myvirtual) c:\Users\CSE-Lab-I\Desktop\CSE\welcome_project>django-admin startapp Welcome_app`
7. Open Visual Studio Code IDE
8. File – Open Folder – Desktop – CSE – select folder CSE and click on open
9. Welcome_app – views.py write the program Ctrl+S
10. Welcome_project - urls.py write the program Ctrl+S
11. Copy urls.py from Welcome_project folder into the Welcome_app folder
12. Welcome_app – urls.py remove the existing code and write the program Ctrl+S
13. `(myvirtual) c:\Users\CSE-Lab-I\Desktop\CSE\ welcome_project>workon myvirtual`
14. `(myvirtual) c:\Users\CSE-Lab-I\Desktop\CSE\ welcome_project>python manage.py runserver`



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15. Copy url i.e. 127.0.0.1.8000 and paste it in the browser url space and press enter.

Day-II (25 November 2022)

The details of second day are as follows:

Day-II Forenoon Session:

The second day forenoon session of workshop was dealt with SQL Server Database in Python with Django in more detail.

Day-II Afternoon Session

The following are the details of day-2 Afternoon session programs based on SQL Server Database in Python with Django:

Steps to write a program which stores data in SQL Server Database in Python with Django

1. Create a folder on desktop.

Ex.: CSE

2. c:\Users\CSE-Lab-I\Desktop\CSE>pip install virtualenvwrapper-win

3. c:\Users\CSE-Lab-I\Desktop\CSE>mkvirtualenv myvirtual

(myvirtual) c:\Users\CSE-Lab-I\Desktop\CSE>

4. (myvirtual) c:\Users\CSE-Lab-I\Desktop\CSE>pip install django

5. (myvirtual) c:\Users\CSE-Lab-I\Desktop\CSE>django-admin startproject

Welcome_project

6. (myvirtual) c:\Users\CSE-Lab-I\Desktop\CSE\Welcome_project>pip install pyodbc

7. Open Visual Studio Code IDE

8. Create folder Templates under Welcome_project (i.e. right click – new folder).



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9. Create following files under Welcome_project

index.html (i.e. right click – new file).

models.py

views.py

10. settings.py - write the code

11. urls.py - write the code

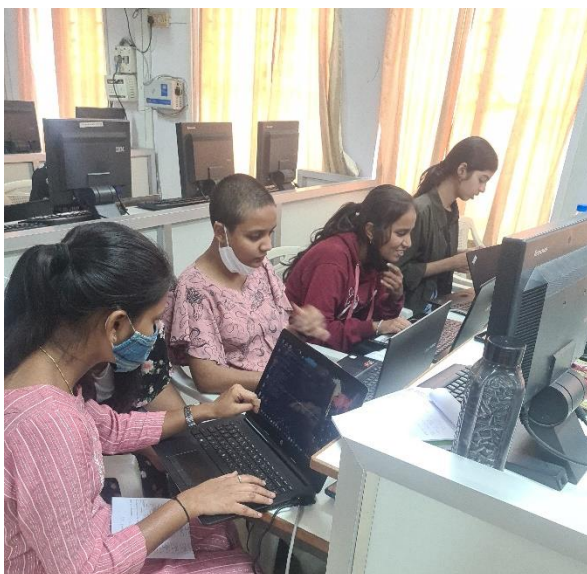
12. index.html - write the code

13. models.py - write the code

14. views.py - write the code

Day-III (26 November 2022)

On the third day students participated in the hackathon. Students were formed into a group of six per team and developed applications based on the content they learned in the workshop. Students have developed almost 20 applications. Each of these applications were presented to the Brainovision team at the end. Two top teams were given with first and second prize.





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III CSE A Students with Brainovision team and CSE Staff



III CSE B Students with Brainovision team and CSE Staff



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Validictory Function



Principal, Brainovision founder with the hackathon winners



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Principal, Brainovision founder with the hackathon runners

All the participants were given the participation certificates in the valedictory function. The hackathon winners were given with merit certificates and prizes the valedictory function. The Feedback from the students were collected. Overall feedback of the workshop and hackathon is good.