



COURSE UNIT



Bachelor of Technical-Vocational Teacher Education MAJOR IN COMPUTER PROGRAMMING: WEB DEVELOPMENT 1

| COURSE MODULE | COURSE UNIT | WEEK |
|--|-------------|------|
| 1 | 13 | 16 |
| Django (Object-Relational Mapping (ORM) Layer) | | |

CHECKLIST

- ✓ Read course and unit objectives
- ✓ Read study guide prior to class attendance
- ✓ Read required learning resources; refer to unit terminologies for jargons
- ✓ Proactively participate in classroom discussions
- ✓ Participate in weekly discussion
- ✓ Answer and submit course unit tasks



UNIT EXPECTED OUTCOMES (UEOs)

At the end of this unit, the students are expected to:

Cognitive:

1. Describe Django Object-Relational Mapping (ORM) Layer.
2. Implement Django Object-Relational Mapping (ORM) Layer.
3. Plan a website that will utilize Django.

Affective:

1. Listen attentively during class discussions
2. Demonstrate tact and respect when challenging other people's opinions and ideas
3. Accept comments and reactions of classmates on one's opinions openly and graciously.

Psychomotor:

1. Participate actively during class discussions and group activities
2. Express opinion and thoughts in front of the class

REQUIRED READINGS

Django Tutorial. (2022). <https://data-flair.training/blogs/django-tutorial/>

STUDY GUIDE

ORM

- object-relational mapper
- main goal is to transmit data between a relational database and application model
- automates this transmission, such that the developer need not write any SQL.
- maps objects attributes to respective table fields. It can also retrieve data in that manner.

Django ORM

The Django web framework includes a ***default object-relational mapping layer (ORM)*** that can be used to interact with application data from various relational databases such as SQLite, PostgreSQL and MySQL.

- Django ORM provides a level of abstraction which makes it easy to work with objects. ORM will automatically relate the object's attributes to corresponding table fields.

TERMINOLOGIES

BROWSER - a computer program with a graphical user interface for displaying and navigating between web pages.

CLIENT - a program, person or things that are capable of obtaining services provided by another program.

CODING - sometimes called computer programming, is how we communicate with computers.

DOMAIN NAME - refers to your website address. This is what users type in a browser's search bar to directly access your website.

FRAMEWORK - a layered structure indicating what kind of programs can or should be built and how they would interrelate.

FRONT-END - refers to the user interface / client-side, everything with which the user interacts.

HYPERTEXT - a word, phrase or chunk of text that can be linked to another document or text.

HYPERTEXT TRANSFER PROTOCOL (HTTP) - The communications protocol used to connect to Web servers on the Internet or on a local network (intranet).

INTERNET PROTOCOL - a set of rules governing the format of data sent over the internet or other network.

IP ADDRESS (INTERNET PROTOCOL ADDRESS) - a series of numbers that identifies any device on a network.

SEARCH ENGINE - a program that searches for and identifies items in a database that correspond to keywords or characters specified by the user, used especially for finding particular sites on the World Wide Web.

SERVER - a computer or system that provides resources, data, services, or programs to other computers, known as clients, over a network.

WEB PAGES - a hypertext document on the World Wide Web.

WEBSITE - a set of related web pages located under a single domain name, typically produced by a single person or organization.

WIREFRAME - a simplified visual guide that represents the skeletal framework of a website.

WORLD WIDE WEB - an information system on the internet which allows documents to be connected to other documents by hypertext links, enabling the user to search for information by moving from one document to another.

FURTHER READINGS

Django Tutorial. (2022). <https://data-flair.training/blogs/django-tutorial/>

UNIT TASK

- Proactively participate in classroom discussions
- Answer and submit course unit tasks

REFERENCES

Django Tutorial. (2022). <https://data-flair.training/blogs/django-tutorial/>

Django Tutorial. (2020). <https://www.geeksforgeeks.org/django-tutorial/>

Django Tutorial. (2022). <https://developer.mozilla.org/en-US/docs/Learn/Server-side/Django/Introduction>

Django Tutorial. (n.d.). <https://www.tutorialspoint.com/django/index.htm>

Django Tutorial. (n.d.). <https://www.w3schools.com/django/index.php>

Getting started with Django. (n.d.). <https://www.djangoproject.com/start/>
