UWE Bristol | University of the West of England

Presentation by

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Web Development and Databases

UFCFES-30-1

(Starter Week: Introduction)

Date

Module Team

- Module leader
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- Module tutors
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Module delivery

- Both Online and Face-to-face on campus learning
- **T**eaching:
  - Pre-recorded lectures
  - **1 practical session**
  - **Fortnight seminar (Online via Teams)**
  - self- study – check your timetable for two teaching terms.
  - You will meet all of the module staff during this time.

- You need to be prepared to do work in your own time - you should aim to spend at least **8-9 hours a week** on this module by either writing code, completing exercises, working on project or reading core text…

- **Tip 1: Do not miss lectures and practical sessions ….**
- **Tip2 : You need to practice by writing code – reading alone is not sufficient to make you a good programmer!**

Blackboard VLE

- There will be no paper hand-outs. All the information used will be available from the Web Programming on Blackboard VLE
  - Module Schedule
  - Module Handbook
  - Learning Material
  - Reading List
  - Assignments
  - Recordings
- Discussion Board – post your queries/questions
- Webinars – for online lectures if needed

- **IMPORTANT:** 1) Check your UWE email regularly – at least once a day! 2) Keep an eye on the course announcements on blackboard

Reading list

- **No single book can cover all the syllabus** …. Pointers to library resources, online resources including books will be provided for different topics and technologies....
- **Reading list: https://rl.talis.com/3/uwe/lists/8E2DBA38-962E-4361-2ED9-671394817428.html?lang=en**

- W3Schools - https://www.w3schools.com/
- Flask official documentation - https://flask.palletsprojects.com/en/2.3.x/
- Flask web development: developing web applications with Python, Miguel Grinberg (2018)
- A beginner's guide to Python 3, John Hunt (2019)
- Database Systems: practical. Approach to design, implementation, and management, Connolly and Begg (2015)
- Fundamentals of Database Systems, Ramez Elmasri (2017)
- UWE Online Library - https://www.uwe.ac.uk/study/library

Room Finder – Frenchay Campus

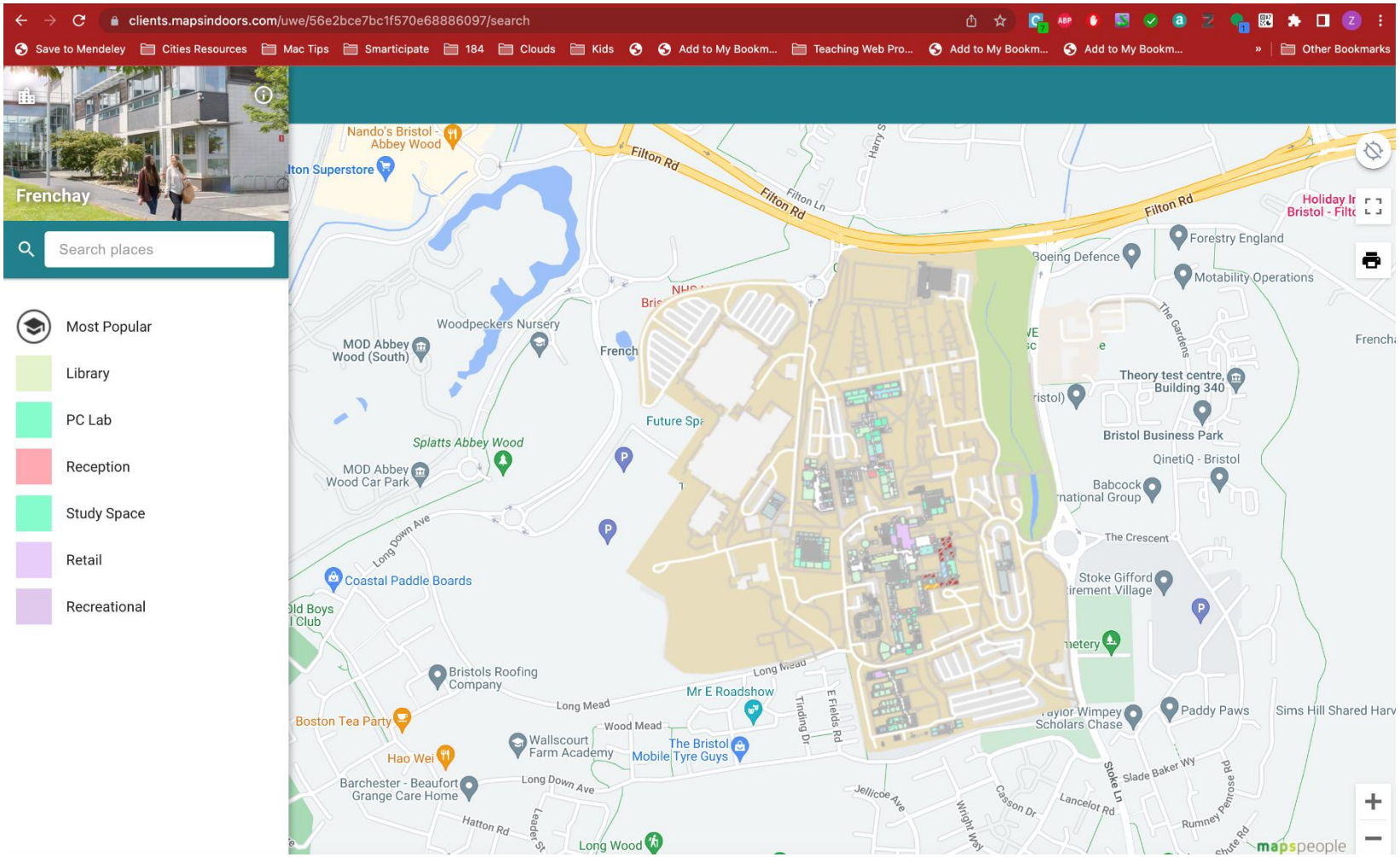
https://www.uwe.ac.uk/life/campus-and-facilities/frenchay-campus/frenchay-campus-map

Room finder

You can use the room finder to locate specific rooms on campus and generate a route to that location by clicking on directions. To adjust the route to suit accessibility requirements, tick the 'Avoid Stairs' box in the directions selector. Please note that unsupported browsers, such as Internet Explorer, could experience content issues.

Frenchay Campus room finder >

Room Finder – Frenchay Campus



Module Assessment

Main Run

Project:
Design and development of a Website
(100%)

You must get at least 40% marks to pass the module

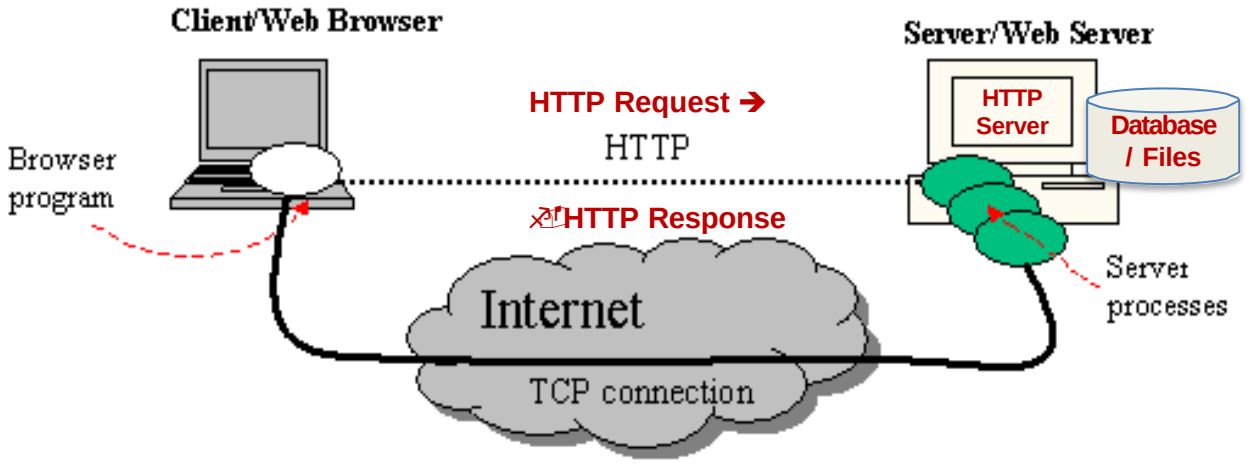
Resit

Project:
Design and development of a Website
(100%)

Overarching module aims

This module aims to develop the **students' understanding of designing and developing web applications and managing data through databases**.

Typically....



A typical client server model

What is Web Development? Why?

- Going through the process of **designing, implementing** and **deploying** secure **websites.**
  - static/dynamic and responsive web pages
  - data manipulation

- **Two aspects:**
  - Front end
  - Backend programming

- **Web development is needed because**
  - for increased **online presence** – global - individually or as a business e.g., e-business, entertainment, education etc.
  - Imagine **pandemic lockdown** without web services!

What is Database? Why?

- **Collection of data or records**
  - E.g., student records in a university, travel itinerary, imdb, etc.
- Provides structure to raw data that can be stored, retrieved and processed
- Database management system – collection of databases e.g., Oracle, MySQL, etc.

Glossary of terms

- URL
- Domain names and Domain Name System
- Client and Server(s)
- Network
- Web browsers (compatibilities)
- Protocol
- Ports
- Web resource – hypermedia
- Web scripting languages
- Static web pages
- Dynamic web pages
- Application Programming Interface (API)
- Database Management System
- Metadata
- Schema
- Relational data model
- SQL and No-SQL
- Primary Key

Familiarise yourself with these terminologies

Advice from other students 1/3

- Keep up to date with the work! Don’t leave things to the last minute. Get help ASAP when you can’t solve the problem, if you can’t do it in a couple of days email it through and get the help, don’t struggle in silence! Plan your assignment work and make your own dates to keep by, don’t get stressed in lectures if the information doesn’t go in straight away. It takes practice! That is how you will learn the concepts and with effect! Also believe in yourself it takes time but you are doing an amazing job!
- Be patience, if don't know ask. S(p)end time getting to know the code properly
- To dedicate some time other than what is set to practice coding as the lectures do not cover everything you might want to use.
- If all the content is available, use it. Don't be afraid to refer the practicals and lectures as they really are useful
- My advice to the coming students is to work hard and don't miss anything because once you miss something then it becomes heavy and hard to catch up.

Advice from other students 2/3

- If you are covering these topics for the first time, I suggest watching videos covering the basics and go and do the quizzes in W3schools as they cover about everything in the module.
- Practice the new software as much as possible. Read up on the different types of ways you can use a website to allow users to have different experiences and interactivity.
- The advice I would personally give to students taking this module next year is take it easy with learning each concept--and really take it in before moving onto the next practical issue and try not to miss lectures or an other sessions as you can fall behind. ALWAYS ASK FOR HELP, even if its the smallest problem.
- My main piece of advice would be to make sure that you have everything working and check that things run before they're needed for practical sessions. e.g. make sure you can not only connect to the remote server, but also have all the folders set up, have mySQL workbench prepared to work with DB tasks. Essentially, be prepared by having all the software installed and functional rather than using valuable practical time to set everything up

Advice from other students 3/3

- start working early and always communicate with your professors/module leaders about any issues you might be having with the coursework or personal issues you are having which is preventing you from finishing your work.
- do NOT slack on the coursework. start it as soon as you get it.
- Make sure that you have some knowledge of HTML before starting the module.
- Don't wait with coursework to last weeks
- Use a lot of your free time to do practical and study
- To participate from the first of the year so nothing miss them
- don't procrastinate and start working on projects early
- the practical are not optional, attending them will make you (not) understand the module.

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Summary

- Web development and databases is going to be very exciting module
- We'll learn both front-end and back-end programming
- You'll learn how to structure, organize and manage data
- You need to be prepared to work hard and particularly to actually sit at a computer and practice your skills
- Don't be discouraged by difficulties – every programmer has had/still has problems - but you learn the most when you overcome problems
- All module material will be available from blackboard
- Attend lectures and practical sessions – complete exercises
- Learn from the experiences of other students – see advice
- If you don't understand, try the answer for yourself - if you still don't understand ASK, but don't expect your tutor to do the work for you!

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Thank you and Questions?