Unit:
Dynamic Websites

Assignment title:
Air Pollution

20 Credit Version

Sample Assignment

Important notes

- Please refer to the *Assignment Presentation Requirements* for advice on how to set out your assignment. These can be found on the NCC Education website. Click on 'Policies & Advice' on the main menu and then click on 'Student Support'.

- You must read the NCC Education Documents *What is Academic Misconduct? Guidance for Candidates* and *Avoiding Plagiarism and Collusion: Guidance for Candidates* and ensure that you acknowledge all the sources that you use in your work. These documents are available on the NCC Education website. Click on 'Policies & Advice' on the main menu and then click on 'Student Support'.

- You **must** complete the *Statement and Confirmation of Own Work*. The form is available on the NCC Education website. Click on 'Policies & Advice' on the main menu and then click on 'Student Support'.

- Please make a note of the recommended word count. You could lose marks if you write 10% more or less than this.

- You must submit a paper copy and digital copy (on disk or similarly acceptable medium). Media containing viruses, or media that cannot be run directly, will result in a fail grade being awarded for this assessment.

- All electronic media will be checked for plagiarism.

Introduction

Air pollution is becoming a growing concern and it can have both long-term and short-term effects on the health of people such as lung and heart conditions, breathing problems and sensitivity to pollution. You have been asked to create a website that provides information about air pollution, including data on air pollution levels now and in the past, in a country of your choice.

The entrepreneurs of Air Pollution are looking for you to create a dynamic website which should include content that changes as the requirements of the user change, e.g. you should include an automatically loading background video. The website should offer a fluid layout and should allow the website to be responsive for reading and navigation on different devices. It should include animation and interaction when accessing different social media buttons or the navigation buttons.

A database will need to be created to allow interested users to create their own personal account. The system will store personal details of each user e.g. their full name, their email address, their date of birth, and their postal address including postcode.

A web enabled application needs to be created to allow users to create, query, browse and manipulate the database and allow the user to create and edit their own records.

The website should include search engine optimisation and include a responsive landing page (which includes a compelling headline, eye-catching images and at least two media links to relevant pollution websites). It should also include call to action buttons which allow users to sign-up for updates. These should be appropriately included on the landing pages. These buttons should be eye catching **and** should offer the customer a free home pollution testing kit.

Users need to create their own account to log into the system via a registration script. Once they log in they should be presented with an interface that allows them to:

- View their account
- Update their information
- Change their password

You are expected to use a combination of PHP, MySQL **and** JavaScript to create this application. Your application should also make use of a web service to show the purchases that have been made.

Task 1 – 32 Marks
Create a landing page for the Air Pollution website which includes the following elements:
- Compelling caption against a clean colourful backdrop
- Clean colourful backdrop
- Eye-catching images
- Scroll-triggered animations
- Automatically loading background video
- Fluid layout
- Animated/interactive social media buttons or navigation buttons

- TWO (2) media links to relevant pollution websites
- At least ONE (1) call to action button (sign-up)
- An offer of a free home pollution testing kit pop-up button for signing up when the customer hovers over the sign-up action button

Task 2 – 18 Marks
- Create the login **and** registration system (if the username is not recognised). This should include username **and** password **and** store personal details of each customer including their full name, their email address, their date of birth and postal address including postcode.
- To gain the highest marks for this task you should make the system as robust as possible including use hashing as a security measure to protect password .
- It should limit the user to THREE (3) attempts at a login if this fails then lock the account for TEN (10) minutes **and** it should check that the username is not already in use **and** that the password is checked against the stored password.

Task 3 – 10 Marks
Once the users have logged on they should have access to their account.

Create an online "*contact us*" form where customers can ask questions. When the user submits the form, it should provide "set" FAQ answers back to the customer before a final submission of the form is permitted, displaying the FAQ page before the customer can submit the form.

Task 4 – 20 Marks
The following additional features should be included in the website:
- Mobile accessible website on phone/tablet
- Suitable use of a web service
- Responsive/adaptive pages based on user needs
- Personalising the content by adding the city name to the landing page header as a personal touch

Task 5 – 10 Marks
Ensure that front end users have the ability to create and query their data that they are currently browsing.

Task 6 – 10 Marks
Using the Rolfe, G., Freshwater, D. and Jasper, M. (2001) model, critically review the learning that you have undertaken in order to complete this assignment.

Based upon your learning, your reflection should include a description; an analysis and; an action plan in order to bring about improvements in the future.

Submission requirements

- For each task, you should present the necessary code and screen dumps in a word-processed document.
- All references and citations must use the Harvard Style.

Candidate checklist

Please use the following checklist to ensure that your work is ready for submission.

Have you read the NCC Education Documents *What is Academic Misconduct? Guidance for Candidates* and *Avoiding Plagiarism and Collusion: Guidance for Candidates* and ensured that you have acknowledged all the sources that you have used in your work?	❏
Have you completed the *Statement and Confirmation of Own Work* form and attached it to your assignment? **You must do this.**	❏
Have you ensured that your work has not gone over or under the recommended word count by more than 10%?	❏
Have you ensured that your work does not contain viruses and can be run directly?	❏