

CS472 WAP Mid-Term Exam Preparation Guide

**Saturday 4 June, Dalby Hall – 10:00 AM,
be there 5 minutes ahead of time to find your allocated seat.**

**You should be able to finish the exam and answer all questions in 120 minutes,
although 150 minutes are granted.**

This exam is graded out of 100 points, it is contributing 30% of your final grade.

The exam will be divided as the following:

- True/False questions
- Short answer questions
- You will be given a block of code and you have to write the output.
- Explain certain things in JavaScript.
- Short programming fixes.
- 2 Main programming questions (Module pattern)

Read every question carefully, some questions are asking only for an output, other questions will be asking for a short code. There are also questions where explanation is needed (Explain why)! Some questions require a combination of all the above.

NO cheat sheet is allowed for this exam (you will be given all the functions syntax with the exam questions, a full page of printed functions will be handed to you with the exam).

Answers are preferred be written with a Pen and not Pencil, if you need to write your answers using a pencil, you should bring your own sharpener and eraser, no stationary borrowing is allowed.

All mobile phones should be turned off and submitted to the stage area at the beginning of the exam.

Please get ready and use the washroom before the exam as no one will be allowed to leave the exam room before turning in their papers.

There is no tolerance policy for final exams. Despite the fact that our quizzes are solved in a friendly atmosphere, exams are not. Once you are caught cheating or trying to cheat, you will be asked to leave the exam room immediately without a warning.

Write your answers with **clear hand writing** and **clear English language**.

Be a professional and show up on time.

Possible question types:

- JavaScript global objects
- Writing unobtrusive JavaScript code (How is unobtrusive styling done in JS?)
- What are the JS types and why is it called 'loosely-typed' and how auto conversion works?
- How do you declare variables?
- What if a variable is used without declaring it?
- What is difference of null and undefined?
- What is the difference of == and ===?
- What values are truthy and falsey?
- Why having semi-colon is important at some cases.
- What is an anonymous functions and why are they often used in JS?
- What is the distinction between declaring a function and invoking a function?
- What is the difference between function statement and function expression?
- How do you set a CSS style property using the JS/DOM?
- What are 'window' and 'document' objects in JS and how are they related?
- Understand exactly when does JS code run?
- What is the window.onload event and how is it involved in writing unobtrusive JS?
- What are setTimeout and setInterval? How we use them?
- What is 'strict mode'?
- Callback functions and how they are queued in the event loop in browser.
- JS Scope, how we define variables in scope and how we create new scope.
- What is a closure and free variable?
- How we fix the closure problem.
- What is hoisting?
- Call(), apply() and bind() to solve Objects borrowing and currying problems.
- What are objects? How do we create an object? How we use "this" inside them? how do we implement prototype inheritance with Objects? How is Object.create(...) used?
- Why should you avoid globals?

- What is the module pattern IIFE and how is it used to avoid globals?
- What is the 'this' keyword and what does it refer to?
- How can we create Encapsulated objects with public/private variables and methods using closures?
- What is a function constructor? how it's used to create new objects? How do we extend its functionality to all the objects and save memory?
- What is the JS prototype property? How we use it? why we use it?
- What is the difference between a function and a method?
- What does it mean to say JavaScript has first-class functions?
- In jQuery terminology, what is the difference between the "jQuery function" and the "jQuery object"?
- What are the 4 overloaded signatures of the jQuery function, and what is the purpose of each?
- Understand looping over DOM elements using .each
- Set/get DOM style properties and style classes using jQuery
- Understand how and when jQuery chaining works?
- Event handlers (JS/jQuery) assign, calls, bubbling.
- What is special about 'this' when used in an event handler (jQuery)?
- What is the same domain origin policy?
- What is JSON? How does it relate to XML?
- What do we return from every jQuery selector (one element, group of elements)?
- Using Geolocation object and finding users's position
- Using LocalStorage and SessionStorage objects to save information in browsers

Good luck.