

# THE UNIVERSITY OF HUDDERSFIELD

## School of Computing and Engineering

### ASSIGNMENT SPECIFICATION

Module Code	CMS3506
Module Title	Software Development
Course Title/s	MSc Information Systems Management, MSc Computing

Assignment Details		
Title	5 Class Tests	
Weighting	50%	
Mode of working for assessment task.	<input checked="" type="checkbox"/> Individual There should be no collusion or collaboration whilst working on and subsequently submitting this assignment.	
	<input type="checkbox"/> Group	
Module Leader	Steve Wade	Contact details: s.j.wade@hud.ac.uk
Module Tutor/s	Steve Wade	

Hand-out date	TBC
How to submit your work	You will need to submit a single document. For each test question you should provide a screenshot of your code to show that you have solved the problem as stated in the exercise.
Submission date/s and times	TBA

Expected amount of independent time you should allocate to complete this assessment	Approx. 10 hrs (assuming you have completed all the practical work and done the necessary unsupervised learning)
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Submission type and format	A test paper submitted to Brightspace
Date by which your grade and feedback will be returned	20 <sup>th</sup> April

Your responsibility	<p>It is your responsibility to read and understand the University regulations regarding assessment.  <a href="http://www.hud.ac.uk/registry/regulationsandpolicies/studentregs">http://www.hud.ac.uk/registry/regulationsandpolicies/studentregs</a>.</p> <p>Please pay special attention to the assessment regulations (section 4) on Academic Misconduct</p> <p>In brief: ensure that you;</p> <ol style="list-style-type: none"> <li>1. DO NOT use the work of another student - this includes students from previous years and other institutions, as well as current students on the module.</li> <li>2. DO NOT make your work available or leave insecure, for other students to view or use.</li> <li>3. Any examples provided by the module tutor should be appropriately referenced, as should examples from external sources.</li> </ol> <p>Further guidance can be found in the SCEN Academic Skills Resource and UoH Academic Integrity Resource module in Brightspace.</p> <p>If you experience difficulties with this assessment or with time management, please speak to the module tutor/s, your Personal Academic Tutor, or the School's Guidance Team. (<a href="mailto:sce.guidance@hud.ac.uk">sce.guidance@hud.ac.uk</a>).</p>
Requesting an Extension	<p>You are reminded to 'back-up' your work as extensions will not be given for lost work, which includes work lost due to hardware and software failure/s.</p> <p>Extension requests will only be approved if you can demonstrate genuine, unexpected circumstances along with independent supporting evidence (e.g medical certificate) that may prevent you submitting an assessment on time.</p> <p>Submit an extension request via Student Portal within 2 working days of the due date.</p> <p>Extension requests, up to a maximum of 10 working days, but typically 1-5 working days, will be considered provided that there is appropriate evidence which clearly indicates reasons for the request.</p> <p>You will have 5 working days after submitting a request to provide the</p>

	<p>evidence. Failure to submit evidence will result in the request being rejected and your work being marked as a late submission.</p> <p>If you are unable to submit work within the maximum extension period of 10 days, contact the School's Guidance team (<a href="mailto:sce.guidance@hud.ac.uk">sce.guidance@hud.ac.uk</a>), as you may need to submit a claim for Extenuating Circumstances (ECs).</p>
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Extenuating Circumstances (ECs)	<p>An EC claim is appropriate in exceptional circumstances, when an extension is not sufficient due to the nature of the request, or it concerns an examination or In-Class Test (ICT).</p> <p>You can access the EC claim form via MyHud or Registry website; <a href="https://www.hud.ac.uk/registry/extenuatingcircumstancesfags">https://www.hud.ac.uk/registry/extenuatingcircumstancesfags</a> where you can also find out more about the process.</p> <p>You will need to submit independent, verifiable evidence for your claim to be considered.</p> <p>Once your EC claim has been reviewed you will get an EC outcome email from Registry. If you are unsure what it means or what you need to do next, please speak to the Student Support Office – SJ1/01</p> <p>An approved EC will extend the submission date to the next assessment period (e.g July resit period).</p>
Late Submission (No ECs approved)	<p>Late submission, up to 5 working days, of the assessment submission deadline, will <u>result in your grade being capped to a maximum of a pass mark</u>.</p> <p>Submission after this period, without an approved extension, will <u>result in a 0% grade for this assessment component</u>.</p>
Tutor Referral available	<p><input checked="" type="checkbox"/> Yes: -</p> <p><input type="checkbox"/> No:</p>

Resources	Please note: you can access free office software and you have 1 Tb of free storage space available on Microsoft's OneDrive system. <a href="https://students.hud.ac.uk/it/unimail/office365/">https://students.hud.ac.uk/it/unimail/office365/</a>

This assignment is made up of 5 separate tests. Each test is worth 20% of the marks for Assignment One. Each test is broken into sections, the number of marks for each section is indicated below.

## CLASS TEST ONE

Provide your answers by editing this page. You should check your answers in C# on a workstation then paste screenshots into this document clearly showing the code you have written.

***Class Test One covers Statements and Sequences, Conditions and Conditional Statements and Iteration. Here are the questions.***

### STATEMENTS & SEQUENCES (5/20)

Write C# programs to do the following:

- a) Convert Pounds to Dollars, where £1 is equal in value to \$1.4
- b) Convert Farenheit to Celcius, by subtracting 32 and then dividing by 1.8
- c) Convert Celcius to Farenheit by multiplying by 1.8 and then adding 32
- d) Write a C# Sharp program that takes four numbers as input then calculates and displays their average.
- e) Take N% discount off a price P

### CONDITIONS AND CONDITIONAL STATEMENTS (10/20)

Write a sequence of statements involving an If..Then structure, and printing out a message:

- a) To find whether a given year is a leap year or not.
- b) To test if the date entered comes before or after today (use the DateTime function for today's date)
- c) To read the age of a candidate and determine whether they are eligible to vote.
- d) To find the largest of three numbers.
- e) To convert a month number (1 to 12) entered by the user into the month name.

### ITERATION (5/10)

- a) Use the (char) function to print the alphabet (char)65 = "A", (char)90 = "Z")
- b) Print the alphabet backwards.
- c) Print every second letter in the alphabet.
- d) Ask the user to enter a number – find how many times the number can be halved before it becomes smaller than 1.
- e) Generate a random number. Ask the user to guess, and prompt with "Too High" or "Too Low" until they guess it correctly.

## CLASS TEST TWO

***Class Test Two covers Arrays and Functions. Here are the questions.***

### ARRAYS (10/20)

- a) To store elements in an array and print it.
- b) To display the contents of an array in reverse order.
- c) To find the sum of all elements in an array.
- d) To separate odd and even integers into separate arrays.

### FUNCTIONS (10/20)

In the following exercises, define a function and declare any variables necessary to perform the required calculations. Each function should be sent the data it needs using parameters. Make sure the parameters are defined with the most appropriate data types.

- a) Write a function that will ask the user to enter their full name, and will then display the message “Hello” followed by their name.
- b) Write a function in which the user is asked to enter two numbers and the product of these numbers is displayed.
- c) Write a function to ask the user for a Price and a VAT rate (in %) and then displays the resulting price including VAT.
- d) Write a function that asks the user to enter the time of day in three parts – hours, minutes and seconds, and then calculates the number of seconds since midnight last night.



- e) Write a function to check if a word specified by the user is a palindrome.

## CLASS TEST THREE

***Class Test Three covers Classes and a program of your choosing. Here are the questions.***

### CLASSES (8/20)

You should write C# code for the following.

- a) Provide code for creating a Rectangle class in C#. The class should have attributes for the height and width of the rectangle and one method named "Area".
- b) Provide code to create a new instance of Rectangle, give it a name and ask it to return its area.

### A Short Program of your Own (12/20)

You should write a C# program, no more than 50 lines in total length that solves an interesting problem. The program can do anything you like provided it includes at least one of each of the following: Conditional statements, iterative statements and parameter-driven functions.

## CLASS TEST FOUR







***Class Test Four covers programming topics in PHP***

You will find teaching materials for this test on Brightspace. These are divided into three sections. For each section you will find an assessment exercise. You should complete each of these exercises.

These are the three sections:

⋮	Introduction to Web Programming with PHP and MySQL	10
⋮	Introduction to PHP	3
⋮	Introduction to MySQL	3
⋮	Accessing MySQL from PHP	3

The first two exercises constitute Test 4 (10 marks out of 20 for each exercise). You will find the first exercise in the “Introduction to PHP” section here:

- ⋮ [SD01\\_intro\\_to\\_PHP](#)  PowerPoint Presentation 
- ⋮ [SD02\\_loops\\_and\\_arrays](#)  PowerPoint Presentation 
- ⋮ [Tutorial and Assessment Materials](#)  Link 

The assessment is the final link - the powerpoint presentations provide the background you need to work through the exercise.

The second exercise is in the “Introduction to MySQL” section - which has a similar structure to the above.

## **CLASS TEST FIVE**

The third and fourth exercises constitute Test 5 (each exercise is worth 10 of the 20 marks for this test). You will find the third exercise in the “Introduction to MySQL” section and the fourth in the “Accessing SQL from PHP” section.