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DES MÉTIERS ET  
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Edmonton2018

TEST PROJECT / PROJET D'ÉPREUVE

# WEB DESIGN AND DEVELOPMENT CONCEPTION ET CRÉATION DE SITES WEB

SECONDARY /  
NIVEAUX SECONDAIRE



## Module A: WordPress Design and Development

The *East Edmonton Mall* is getting ready to open its doors as the second largest mall in Canada. The owners of the mall have hired you to develop the Web site and logo for their new mall. They have provided you with a list of requirements for the Web site to help guide your design. They want to ensure their site uses a very clean layout and is accessible and responsive to all of its clients on a variety of devices (mobile phones, tablets, etc.).

### Part 1: Web Design

Part one of this module is to develop both the logo and graphical look and feel for your site design. This should focus on your layout ideas and must meet your client's requirements. You need to provide a layout for each of the site's breakpoints: a smart phone layout, medium tablet layout, tablet layout, and a full-size layout for your design.

You will be provided with text and images to use in your design. You are not required to use all the provided images or text. You may use your discretion in choosing text and image placement to give a good overall feel of how the site would look once constructed. You are free to modify any of the provided images and text in any way that you feel contributes to the quality of the design; however, the content of any text will not be taken into consideration in evaluating your work.

### Requirements

- The site must incorporate your logo and will appear on every page.
- There should be a top-level menu that appears on every page and include the following items: Home, Stores, Contact Us.
- The site is to include linked icons to the social network applications Facebook, Instagram, and Twitter.
- There should be a large, rotating banner to allow the mall to promote specific stores and events.
- The site must be responsive so that it works on a variety of devices, including: smart phones (less than 768 px), small tablet (greater than or equal to 768 px), tablets (greater than or equal to 992 px), desktop and laptop computers (greater than or equal to 1200 px)



## Judging Scheme

Aspect Description	Point(s)
Read and understood the requirements  0 – missed the mark 1 – design meets some of the requirements 2 – design meets most of the requirements 3 – design meets all of the requirements	3.00
Logo has been provided	2.00
Overall quality and impression of the logo design  0 – no logo provided 1 – minimal effort logo (e.g. plain text) 2 – medium effort logo 3 – well designed logo	2.00
Web site design for smartphone provided	1.00
Web site design for small tablet provided	1.00
Web site design for large tablet provided	1.00
Web site design for desktop provided	1.00
Web site design includes a top-level menu with all items	2.00
The logo is integrated well into the design  0 – the logo is missing 1 – the logo feels “slapped into” the design 2 – the logo does not naturally fit into the design 3 – the logo is well integrated into the design	2.00
Linked Facebook icon is present	0.34
Linked Twitter icon is present	0.33
Linked Instagram icon is present	0.33
There is a large rotating banner	2.00
The rotating banner is well designed  0 – no indication of rotation and navigation 1 – indication of number of banners but not navigation 2 – indication of navigation but not the number of announcement 3 – indication of both number of banner announcements and navigation	2.00
Overall feel of the site design  0 – poor design 1 – clunky design 2 – moderate design 3 – clean, modern design	3.00

Aspect Description	Point(s)
Accommodation for responsive elements	2.00
0 – no obvious accommodation	
1 – only the menu is responsive	
2 – menu and banner are responsive	
3 – all elements of the design are responsive (menu, banner, textual content, social media icons, etc.)	
The top menu has a 'Home' link	0.34
The top menu has a 'Stores' link	0.33
The top menu has a 'Contact Us' link	0.33

### **Part 2: Template Development**

The East Edmonton Mall owners are excited about your design and want you to move on to the next stage of the process. They are working with another company to host their Web site and this company uses WordPress as the content management system. This part of the project requires that you convert your design into a WordPress template.

You have been provided with the BlankSlate theme as a starting point for your work. You must now develop the HTML and CSS needed to implement your design. You have also been provided the Bootstrap framework which you must use for your layout.

Once you have created your theme you need to create the site's pages in WordPress and ensure your menu links to these pages. As with Part 1, you can use the provided text and images. Refer to the client requirements from the previous part for the pages that you must create. You will be judged on the fully functioning WordPress site.



## Judging Scheme

Aspect Description	Point(s)
Read and understood the requirements	3.00
0 – missed the mark 1 – design meets some of the requirements 2 – design meets most of the requirements 3 – design meets all of the requirements	
WordPress theme provided	3.00
Theme uses Bootstrap for implementation (grid layout, markup, etc.)	3.00
WordPress theme has smartphone break point	0.50
WordPress theme matches design for smartphone break point	1.00
WordPress theme has small tablet break point	0.50
WordPress theme matches design for small tablet break point	1.00
WordPress theme has large tablet break point	0.50
WordPress theme matches design for large tablet break point	1.00
WordPress theme has desktop break point	0.50
WordPress theme matches design for desktop break point	1.00
Top navigation menu links to corresponding pages	2.00
WordPress page created for landing page with content	2.00
WordPress page created for contact page with content	1.00

## Module B: JavaScript Game Development

For this module, you will create a snake-like game in JavaScript using HTML5 Canvas. The game will include a menu screen, a game screen, and a high score screen.

The game should start with a snake in the centre of the screen. The snake starts moving when the game starts and it should not stop moving until the game is paused or concluded. Walls around the edge of the screen will block the snake from navigating beyond the game area. The game should read data from a server that defines the size of the game area.

The player uses the keyboard's "enter" and arrow keys to navigate the menu. While playing the game, the arrow keys control the direction of the snake. The body of the snake follows the head as it moves around the game area. The player can pause and continue the game at any time by pressing the "p" key. The controls should be visible to the player prior to the start of the game.

The snake's objective is to eat items that randomly appear on the game area. As the snake eats each item, it gets longer and increases its speed. Eating an item also results in being awarded a point. The snake will have three lives. If the snake collides with (i.e. eats) itself or collides with a wall then it loses one of those lives. In the event of such a collision, the snake will be reset on the centre of the game area with its original size (i.e. the size that it was when the game started). Once the snake has lost all of its three lives then the game is over and the user is notified and upon confirmation is returned to the main menu.



### Judging Scheme

Aspect Description	Point(s)
The game is rendered using Canvas	2.00
The page will show a warning message to browsers that do not support the Canvas element	2.00
The player controls the snake's direction using the arrow keys	2.00
The player can pause and continue the game by pressing the "p" key	2.00
Game allows the user to navigate the menu using the arrow keys	2.00
The game controls feel responsive and predicable	2.00
0 – controls are not responsive 1 – game does respond to some of the expected key presses 2 – game responds to most of the expected key presses 3 – game response to all of the expected key presses	
Each piece of the snake follows the previous piece up to the head	2.00

Aspect description	Point(s)
Snake maintains its speed and length as it moves  0 – there is no indication that snake maintains its length and speed 1 – the snake maintains its length or speed as it moves 2 – the snake maintains its length and speed as it moves but the movement appears choppy 3 – the snake maintains its length and speed as it moves and the movement appears smooth and consistent	2.00
The snake starts with three lives	2.00
The snake's lives are visible to the user during the game	2.00
The snake loses one life in the event of a collision with itself	2.00
The snake loses one life in the event of a collision with a wall	2.00
After a collision, the snake is reset to the center of the game area  0 – there is no indication that the snake has collided with itself or a wall 1 – the snake is reset on the game area but not in the centre and the size of the snake remains the same 2 – the snake is reset to the centre of the game or its size is the same as when the game started 3 – the snake is reset to the center of the game area and its size is the same as when the game started	2.00
Snake grows in length after eating an item	2.00
Score increases by one every time the snake eats an item	1.00
A new item appears randomly after the previous item has been eaten	1.00
A new item appears in an open, unoccupied space in the game area (e.g. it does not appear on top of the snake or on top of a wall)	1.00
The snake does not stop moving once it has started, unless the game paused or is over	1.00
The snake cannot go past the game area	1.00
The snake cannot go through walls	1.00
The walls are rendered and positioned according to data from a server	1.00
The size of the game area is determined from data on a server	1.00
The game starts at the menu screen once the page loads	1.00
User starts the game using the main screen menu	1.00
The main screen menu is understandable and useable  0 – there is no menu 1 – there is a menu but its options are unknown and its use is not easily understood 2 – there is a menu and its options are clearly visible and its use is easily understood 3 – there is a menu and its options are clearly visible and its use is immediately understood; menu selection is visually acknowledged	2.00
The snake's score is visible to the user during the game	1.00

Aspect Description	Point(s)
User is taken to a high score screen when the game is over and a new high score has been achieved	1.00
User is taken to a high score screen when the game has been won and a new high score has been achieved	1.00
User must enter two or three letters when inputting their name as part of a high score; a high score is saved after the user enters their name and presses the “enter” key	1.00
While entering their name, the user may use the “backspace” key to change a letter	1.00
The high score entered is saved to the database	1.00
High scores are read from the database	1.00
High scores are accurately displayed for the user, showing them in order from highest to lowest score	1.00
SQL injection is prevented during every interaction with the database	1.00
Once the game is over and the high score is saved, the user is taken back to the menu and prompted to play again	1.00
The user is presented with a “Game over!” message if the game is lost  0 – there is no game over screen 1 – there is no indication when the game is over other than the snake stops moving 2 – there is an indication that the game is over but it’s not visually appealing 3 – there is an indication that the game is over and it is visually appealing	2.00
There is a clear indication when the game is paused  0 – there is no pause ability 1 – there is no indication when the game is paused other than the snake stops moving 2 – there is an indication that the game is paused but it is not visually appealing 3 – there is an indication that the game is paused and it is visually appealing	2.00