**Can you list few techniques which you can use to make responsive websites as a frontend developer?**

* Develop the website in such a way that it is compatible with most of the devices. People usually access website through their mobile devices due to ease of access. Having a website design that is not compatible with the mobile devices could significantly reduce the incoming traffic.
* It would be a good idea to have slight design adjustments when it comes to mobile devices. Since it is difficult to navigate between webpages due to small screen size in mobile devices, I would suggest to have the details displayed in more compact manner than requiring to browse through multiple tabs or pages. For example, in the case of e-commerce website, it would be better to handle the checkout in single page and leaving the multipage checkout for the website where users have better resolution and better navigation facilities.
* Mobile devices have the ability to display the data in landscape mode as well. Ensure that your website is designed to be compatible to this.
* Analyze the website traffic and identify the most commonly used devices to access the website and make sure that website is compatible with those resolutions.
* Avoid using too many ads as users could get pretty annoyed and leave the website altogether.
* While working with images, make sure that they are good quality as you may need to resize them depending on the resolution of the devices. Using a poor quality image, could make it look blurred when a device with higher resolution is used. This pointed should be handled with extra care when It comes to the logos or headings of the website as it could create a bad impression about professionalism. Using large images could lead to more loading time and waste of space in devices with lower resolution. It would be better to have the images in multiple sizes so that the correct image could be chosen based on the device resolution.
* Make sure to have the text size adjusted and readable based on the device resolution.

**How can you test a website responsiveness? Which tools in modern browsers you can use for that?**

One way to test for website responsiveness is to see how the website displays in different devices with different resolution. It could not be possible to have the devices of all possible resolution to have it tested out. In such cases, a tool to test the website display across different devices could be handy. One such website/online tool is <http://www.responsinator.com/>. Upon providing your website URL, the site would display how your website would look across devices hence saving the testing time. Most modern websites these days have in-built tools for the developers to test the responsiveness.

One point to make sure to achieve better responsiveness, is it make sure that the text is also of the right size depending on the resolution.

Make sure that the website content can be displayed both horizontally and vertically and that the links in the websites could be opened from any devices and supported by different browsers.

The browser Google Chrome has a developer option tool which allows you to view how your screen would like on a mobile device. It is called the Device Toggle Toolbar. Once the option is turned on, it provides the developer with different devices to test on and provides a view of how the website would look and that device. The device toggle toolbar also has the option to test the throttling - prevents an event from being executed multiple times in a time-period no matter how many times the user fires it. The display can also be viewed both horizontally and vertically on the device type chosen.

The latest version of browser Firefox Mozilla also has the Responsive Design View in the developer option similar to the one offered by google chrome. It lets us test a website across resolutions of different devices both in vertical and landscape mode.

**What is your favourite text editor and why?**

My favourite text editor is Notepad++. I discovered the editor when I started working for UST Global and since then, it has been my constant companion. It provides a general ease while coding in a wide variety of languages and can provide file management and migration capabilities as well. The text highlight for keywords using a range of color codes and indentation capabilities using tabs are remarkable on its own and provides an ease while reading and writing packages and procedures. The visual ease while writing programs provides with easy readability while adding necessary revision history at the top of files. It helps understand the basic functionalities associated with my code any time I use it. While transferring these files, it had always been helpful for my colleagues as well to analyze and provide modifications in the existing file. Another essential advantage I have had with Notepad++ is that, the data I write is automatically stored in its memory even if I accidentally close the application. The files would only be closed if they are closed within the application and this provides for an advantage in case of power losses as well. Although occasionally, it gets slow while handling data above 50 MB, the overall advantages of the application deems it a worthy option for software professionals and I would recommend the product to anyone who is looking for a good text editor.

**What is the one keyboard shortcut you wish everyone would know?**

Screenshots are always an essential part of work environment as they provide a proof of a particular action. While Ctrl + PrtSc can copy the screenshot of the entire screen to the clipboard and there exists numerous clipping tools, Windows 10 provides the capability to clip only a certain part of the screen and save the image to the clipboard much faster than other applications by making use of keyboard shortcut - Windows Key + Shift + S.

**What was the last article or book you have read related to IT? What did you learn from it?**

The last academic article I read in relation to IT was about the dynamic program slicing method. A program slice contains a set of program lines that could possibly affect the value of a variable. I had developed a program slicing tool for my master thesis but it supports static slicing. I was reading more about dynamic slicing to know how it works and its advantages. With Static program slicing, we do not have access to run-time information about the program and hence could generate a slice that contains certain lines that might not even be executed and hence make the analysis non-worthy. The main idea behind program slicing is to reduce the amount of information that needs to be absorbed by the programmer during debugging. Dynamic slicing further reduces the amount of information by including all the program lines that would be executed as it has information about the control flow of the program and the run time value of the variable which static slicing does not have.

The last IT news, I read was about a portal called Worthi developed by Citi for the US citizens which based on a questionnaire would analyze the user’s skills and it current demand it market. It helps the users to identify the current skills in demand so that they equip them with the skill. This tool would be beneficial for job seekers who are facing issues with job to identify what they’re missing and train them accordingly and also help them to identify what all roles they could try for based on their current skillset. I think this tool should be available in Ireland as well.

**Have you ever worked with API? Can you describe what is it for?**

An API is a way of programmatically interacting with a different software. For my undergraduate degree, I had developed an SOS application which would send the user’s current location to the emergency contacts when the user is in danger. For this, I had to use the Google maps API to connect to the Google Map and fetch the user’s location every 15 minutes. I also the SmsManager API to access the messaging/texting service of the device to send the extracted location to the emergency contact. If the API’s were not available I would have had to create a messaging service and a map service on my own for the app. With the help of the API’s, I could simply fetch the data from the existing services and use it for my app.

**Ignoring cookies, what other technology or approach you can use to store data on client side?**

Whenever we access a webpage, the server sends a cookie to the web-browser containing our details on that specific session. When we access the same website next time, the browser sends the cookie to the server which helps it to retrieve the previous preferences and details of last session and provide customized data. Cookies are stored locally on the web browser and is sent with every HTTPRequest. Hence the size of the cookies should be small so as not to gloat the request. If the size of the cookie is large it would take much time to send it over to the server. A not so strong internet connection adds more horror to the situation.

The Web Storage that came with HTML5 allows to store much more data locally than a cookie and also eliminates the need to send the data to the server. The user can of course sync it with the server if he wishes to do so. Web Storage provides 2 types of storage, Local Storage and Session Storage. The local storage hold the data without any expiry date until it is explicitly deleted. The Session storage only holds data for a particular session and is deleted when that browser window is closed. In the case of local storage, if 3 tabs are open in the same browser for the same site, all of them would be connected to the same local storage container. This way if you are in e-commerce site and has multiple active windows, the local-storage prevents the items in the cart being over-written or have same item purchased twice.

**Pick a site you are familiar with and list 3-5 things you would do to improve its UI/UX.**

While exploring the official website for ALDI (One of the most common supermarket facilities available in Ireland), I found that the site holds a lot of justice to a go-to store for all major grocery and certain household items. However, I feel that some additional capabilities in its user interface can help the overall outlook and public outreach for ALDI.

* The most minor change I would like to bring in would be a change in color pattern throughout the site. As advertisements go towards food and necessary groceries, the site would need to bring in a lot of images of the same which ALDI does effectively. Although, I feel the background colors and the colors of tabs and boxes brings in a feel of uneasiness to look at, due to the incorporation of multiple colors. I believe ALDI can opt for one solid color and a lighter color from its logo to build the site as there exists a wide variety of other colors in the advertised images.
* I feel the site uses a lot of hyperlinked words for migrating to other pages which can easily be communicated effectively by making use of icons instead. It provides a sense of ruggedness while looked at from a user perspective as dropdown links and page links come in the same line.
* Multiple links serving the same purpose brings down the capability of the site to bring in more data in a shorter space. For instance, there are three links to facilitate click and collect in the homepage while I could not find a link for User Login. The links opened up a new tab on my browser which can result in uneasiness in terms of data access.
* The website makes use of the popular choices to advertise the products. It is an effective mechanism but at the same time, I believe that popular items don’t need to be advertised as they can hold their popularity on their own. I believe that the site should be more of a personal space for the customers and hence the products need to be advertised based on the category of the products that they have purchased earlier or the products available in their carts. Other than that, popular discounts can be advertised which ALDI has done effectively.