**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.

**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.

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.