1. **Mobile Application Development Tool**
   (Publish The document as a web page on the server setup in Q1)

The three main architectures in developing Mobile apps are Native Apps, Web Apps and Hybrid (cross-platform) apps. Each architecture allows the apps to be developed for iOS, Android, Windows Phone, etc. platforms.

Your task is to select a **development tool** (Android Studio, MIT App Inventor, Basic for Android, **XAMARIN**, Cardova Phonegap, etc.) to develop apps for any architecture. Explain about the tool in terms of:

(a) Tool Name : XAMARIN
(b) Platform: IOS 8, Android 5.0, Windows 10 Universal Windows Platform
(c) Application Development Type : indicate the
      a. Type : Cross-platform
      b. Advantages : Developers can share as much as 75% of the code across the carrying operating systems.
      c. Disadvantages : Lack of ability to share code outside of Xamarin.
(d) Website : https://dotnet.microsoft.com/apps/xamarin
(e) Developers : Martin, Coll, Matthew Baker, Daria Sukhonosova
(f) Release Date : May 28, 2014
(g) License : -
(h) Price : Business ($999/year), Enterprise($1,899/year).
(i) Programming Language(s) : C#, F#, VB.NET, ASP.NET, MVC, HTML, CSS,
(j) Features : Native platform integration for Android and iOS, Various code signing, PCL, Diagnostic tools, Application loader, Google emulator manager.
(k) Debugger : -
(l) Built-in Emulator : Android
(m) Host machine requirements in terms of hardware : at least 4GB RAM
(n) And software : Windows 10
(o) Integrated Development Environment (IDE) – does it have an IDE or use any editor (notepad++) to create the code : It has IDE
(p) Software to be installed on the host machine before you can create an app
(q) Advantages : Developers can choose from a host of free paid components, which include UI controls, cross-platform libraries, and third party web services to apps with just a few lines of code.
(r) Disadvantages : Lack of community support of Xamarin.
(s) Language availability : English, French, Spanish, German, Chinese, Russian and Portuguese.
(t) Uploading and Selling an App – Do you need to pay any license fee to upload the apps? If so, how much, steps involved in selling an app along with the dollars and cents as a share : No paid fee needed.

(u) Third –party emulator which can be linked to the tool : Select an emulator and explain in detail : -

(v) Market Share : 18.72%%

(w) Number of apps available : 13

(x) Number of downloads/users if applicable : 60,000+

(y) Any other two properties not listed above

(z) Customer Service: UPS, Outback Steakhouse, Azure App, Caren, Olo, Taxfyle, Alaska Airlines, BBC Good Food.

(aa)   OOS company contributors: 3,700+

https://www.softwebsolutions.com/resources/5-reasons-why-xamarin-is-cross-platform-development-king.html

https://www.fortuitas.com/Resources/Blogs/are-there-any-problems-with-xamarin-1

https://www.datanyze.com/market-share/madp/xamarin-market-share