**Software Engineering - Assignment 1**

1.2. What is the most important difference between generic software

product development and custom software development? What might this mean in practice for users of generic software products?

**Plan of slide:**

1. Software products.
2. What is generic software product development?
3. What is custom software product development?
4. Custom Software Development v/s Generic Software Development
5. What might this mean in practice for users of generic software products?

**Software products**

**Software Products** are nothing but software systems delivered to the customer with the documentation that describes how to install and use the system. In certain cases, software products may be part of system products where hardware, as well as software, is delivered to a customer. Software products are produced with the help of the software process. The software process is a way in which we produce software.

**Types of software products:**  Software products fall into two broad categories:

1. **Generic products:**  Generic products are stand-alone systems that are developed by a production unit and sold on the open market to any customer who is able to buy them.
2. **Customized Products:**  Customized products are the systems that are commissioned by a particular customer. Some contractor develops the software for that customer.

**What is generic software product?**

 Generic Software is designed in general for public use. A software that isn’t designed for a specific purpose or person. Generic software is also known as content-free applications. Every person in their school, college, or work has used generic software, maybe for a project, a presentation, etc. Some commonly used generic software are Firefox, Excel, Word, PowerPoint, Notes, Outlook, etc. A Generic Software is not limited to a particular application and can perform numerous different tasks, such as a spreadsheet application. A spreadsheet application is a generic software.

It performs various tasks without requiring any modifications; engineers use the tool for calculating purposes, whereas accountants use it as a finance tool. Functionality, reliability, efficiency, and portability are some of the features noted when building generic software.

With generic software, there is no prior customer; software designing companies design the software needed in the market, a software that sits right with the needs of various businesses over a long stretch of time. The software is built at the design company’s own cost and expense and later on sold to various customers as a product.

**What is custom software product?**

Custom Software is software that is specially designed for specific organizations or users. A company or a single user may hire a software developing company to design software that can provide specific results and functions like **custom app android** etc. The software is not of general use and caters to only the needs of the company. Everything that goes into the software, the list of requirements, the functions, the expense needed to build the software is covered by the client. Usually, **custom apps** and software takes a lot of time to be developed; generic software, on the other hand, does not require much time since the needs of the app are quite common.

Some major examples of custom software are automated [**invoicing software**](https://www.techimply.com/software/billing-and-invoicing-software), bug tracking software, customer relationship management, etc.

To choose between custom software and generic software, you must first have the deciding data. Being aware of the pros and cons of each option is important. If the pros outweigh the cons and the choice seems acceptable, you might be able to make the correct choice.

**Custom Software Development v/s Generic Software Development**

Since custom software provides customized functionalities according to a client’s business requirements, it is proved to be far more useful compared to generic software.

Further, we cover the various features, characteristics, and requirements that differ for custom software and generic software.

* **Exclusiveness**

Custom software is exclusively designed for the needs of a particular business or client, whereas generic software caters to the needs of many and is produced for the open market. Generic software is not exclusive, rather general.

* **Needs and updates**

The updates done in generic software are done according to the requirements of the market. When making a generic software designer, keep note of future updates and develop the software accordingly.

With custom software, changes are done when required by the client. If a customer wishes to add some features to their software or wishes to make some changes in the software’s working, they can reach out to get an update. Custom software updates are not general; everything depends on the client, the update time, and the changes made through the update; the client is the boss.

* **Control**

The key difference between generic software and custom software is its control over its development process.

If we talk about generic software, the software users have no control over the development of the software. The designers design the software keeping note of the basic requirements of a wide number of users. The only influence on the development of software is by the development agency. Even though users need a license to use the software, the development agency can make changes to the software that might seem useful.

The sole control on the development of custom software is by the client/customer. It all depends upon the customer how they will use the software. What features are to be added to the software? When should the software be updated? What are the various functioning of the software? All these answers depend upon the customer.

* **Development cost**

Generic software is affordable since the developing agency does not have to design the software according to the wishes of a particular client and creates software that can be useful to a number of businesses. Generic software is designed with the money of the designing agency, so naturally, the cost of building generic software is lower when com[pared to custom software. However, some extra costs are required in some generic software, such as extra costs required to set up and implement the software.

Have you ever bought a suit from a store? Remember how much it cost? Now let’s say you get a tailor-made suit. Which do you think will cost the most? The tailor-made suit will cost more because it is made according to your style, size, and shape. The suit from the store is like the generic software designed for all who wish to purchase. Whereas the tailor-made suit is one of a kind, made exactly according to the client’s wishes.

Custom software costs a fortune since the software is one of a kind and since the customer ends up with a unique product. But when you factor in the benefits of custom software, these high developing costs may no longer matter.

* **Number of functions**

Off-the-shelf software that is generic software is made with key importance given to versatility. Generic software is known for its wide number of uses and functions. This software includes basic features but in a simple form, but you might notice that one hardly ever uses half of the various functions provided by the off-the-shelf software.

Custom software focuses only on the requirements of the client or customer. It cannot be used by all and so is not user-friendly as generic software. It is designed for specific types of users who know how to handle the software.

* **Functionality**

As mentioned above, generic software has functions that are designed to solve particular problems for various entities. Let’s take the example of the spreadsheet application once more. Spreadsheet software is used by engineers for calculating purposes, whereas accountants use the same application for financial purposes. The software remains the same, but the uses vary.

Custom software is the complete opposite of generic software; the functions designed in custom software are made to solve specific problems and can only be used by the client.

* **Architecture**

One of the key features of generic software is that it is designed to be scalable. The design is kept so that it can be pivoted during the years as per the requirements of the developing company. Unlike generic software, custom software does not focus keenly on scalability, and it is designed with a balance between scalability and the client’s current requirements. The software’s key focus is delivering the customer’s current needs and the flexibility of future modifications.

* **Quality**

While developing generic software, developers do not concern themselves with perfection; the quality of the software is not the major parameter. This is why a software developing company does not focus minutely on the quality, and the major concern is the release. If the company were to delay the release of generic software to focus and refine the quality of the software, the company might have to face huge losses in the market.

Custom software, as mentioned above, is opposite to generic software. Since custom software is built to cater to the client’s needs, the utmost priority is given to the quality of the software. The software quality has a major impact on the revenue and progress of the company it is designed for, so the quality of the software is designed with revenue in mind. The higher the software’s impact on the client’s business, the higher the quality will be.

Now that you know the functions of generic software and custom software, you might have some form of clarity to figure out which software works best for your business and needs. To further help in your decision, below are the Pros and Cons of these two software types.