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Systems Analysis and Design

INT 4202 - 1952-202310\_INT4203\_M

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**Week 10 Assignment**

**1) List and briefly discuss three types of reports (outputs) from a system.**

The three types of reports, or outputs, from a system are detailed reports, exception reports, and summary reports (Tilley, S. p. 251).

Detail reports – With detail reports you are going to produce one or more lines of output for every individual record that is processed (Tilley, S. p. 251). As a result of printing multiple lines for every record detail reports are often very long (Tilley, S. p. 251). Since detail reports are often very long it may take a long time to find a specific line or detail which you are looking for as you will likely have to go through many pages.

Exception reports – Exception reports are reports which only show the records that have been specifically searched for or have a specific condition or conditions set (Tilley, S. p. 251). Exception reports are most useful when you’re trying to find something specific and would be more preferred than a detailed report when looking for something specific, however, it may have less details than the detailed report (Tilley, S. p. 251).

Summary reports – Summary reports are most often used by upper level managers who only want to see total figures or general information and do not need every detail available (Tilley, S. p. 251).

Outside of these reports, however, there are other types of output technologies from systems. For example, there is email, blogs, instant messaging, wireless devices, digital audio images, and video, automated fax systems, podcasts, computer output to digital media, specialized forms of outputs, as well as the Internet in general may serve as an output (Tilley, S. p. 252 – 254).

**2) Describe modular design, and explain the two main prototyping methods.**

Modular design is when you create individual components, or modules, and then connect them to higher-level programs or processes (Tilley, S. p. 257).Modular designs can use both structured and object-oriented designs, with structured designs each module will represent a specific process, in an object-oriented design each module represents classes (Tilley, S. p. 257).The entire point of a module is to perform a singular function which allows modular design to be extremely flexible as they can be developed and tested by themselves and should work by themselves (Tilley, S. p. 257).Modules are also intended to be used in multiple locations, or in other words reused (Tilley, S. p. 257). With modular design in large-scale systems it allows separate teams to be able to work on different areas and integrate their results and work (Tilley, S. p. 257).

The two main prototyping methods are system prototyping and design prototyping (Tilley, S. p. 259).

System prototyping – With system prototyping the goal is to produce a fully-featured, working model of the information system being developed (Tilley, S. p. 259). It aims to create a system prototype that is already fulfilling of every requirement and ready for implementation, while also receiving user feedback and meeting user and management requirements (Tilley, S. p. 259).

Design prototyping – With design prototyping analysts will verify user requirements and then discard the prototype and continue with implementation (Tilley, S. p. 259). It is also often referred to as throwaway prototyping for this reason (Tilley, S. p. 259). The objectives of design prototyping are often more limited but not less important, having the result product of design prototyping being a user-approved model that has everything documented and benchmarks of the features for the finished system (Tilley, S. p. 259). Design prototyping allows the capture of user input and getting approval while also developing the system to be possible (Tilley, S. p. 259).

With design and system prototyping there are, of course, trade-offs as they have different benefits, strong points, and weak points, and may be compared to having no prototyping. For example, users and systems developers may be able to avoid misunderstandings more easily with prototyping, allow the creation of accurate specifications for the finished system based on the prototype, on top of other benefits (Tilley, S. p. 259 - 260). However, there are some disadvantages such as the rapid pace of development, potential reliability and maintainability problems, and issues with complexity among others (Tilley, S. p. 260).

References

Tilley, S. (2020). Systems analysis and design (12th ed.). Cengage.

I have neither given nor received unauthorized aid in completing this work, nor have I presented someone else's work as my own.

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