

Assignment No - 3

1) What is implementation support and also explain architecture of windowing system.

① Implementation support is a planned approach to support in implementing a plan or design to ensure success of overall system.

② The programming support that is provided for the implementation of an interactive system are:

- i) Programming tools
- ii) Windowing system
- iii) Interaction Toolkits
- iv) User Interface management system [UIMS]

i) Programming Tools :-

~~Programming tools for interactive system provide a means of effectively translating design and usability principles into an executable form.~~

This tool provide different levels of services for the programmers . e.g - microsoft visio, visual studio , .net etc.

levels of programming tools :-

1. Windowing system
2. Interaction toolkit
3. User Interface management system.

b) Windowing System :-
 Windowing system is an environment which manages input resources.
 e.g. - screen display & input devices.

It supports management operations on windows, for both programmes and user of the interactive system.

A given windows system have a fixed generic language for abstract terminal called it's imaging model e.g. pixels, Graphical kernel system, Postscript.

3) Interaction Toolkits :-

We known that input & output devices & their functions are separate.

e.g. We use mouse use & we use mouse.

4) User Interface management system :-

A user interface management system is a mechanism for clearly separating process of business logic from graphical user interface (GUI) code in a computer program.

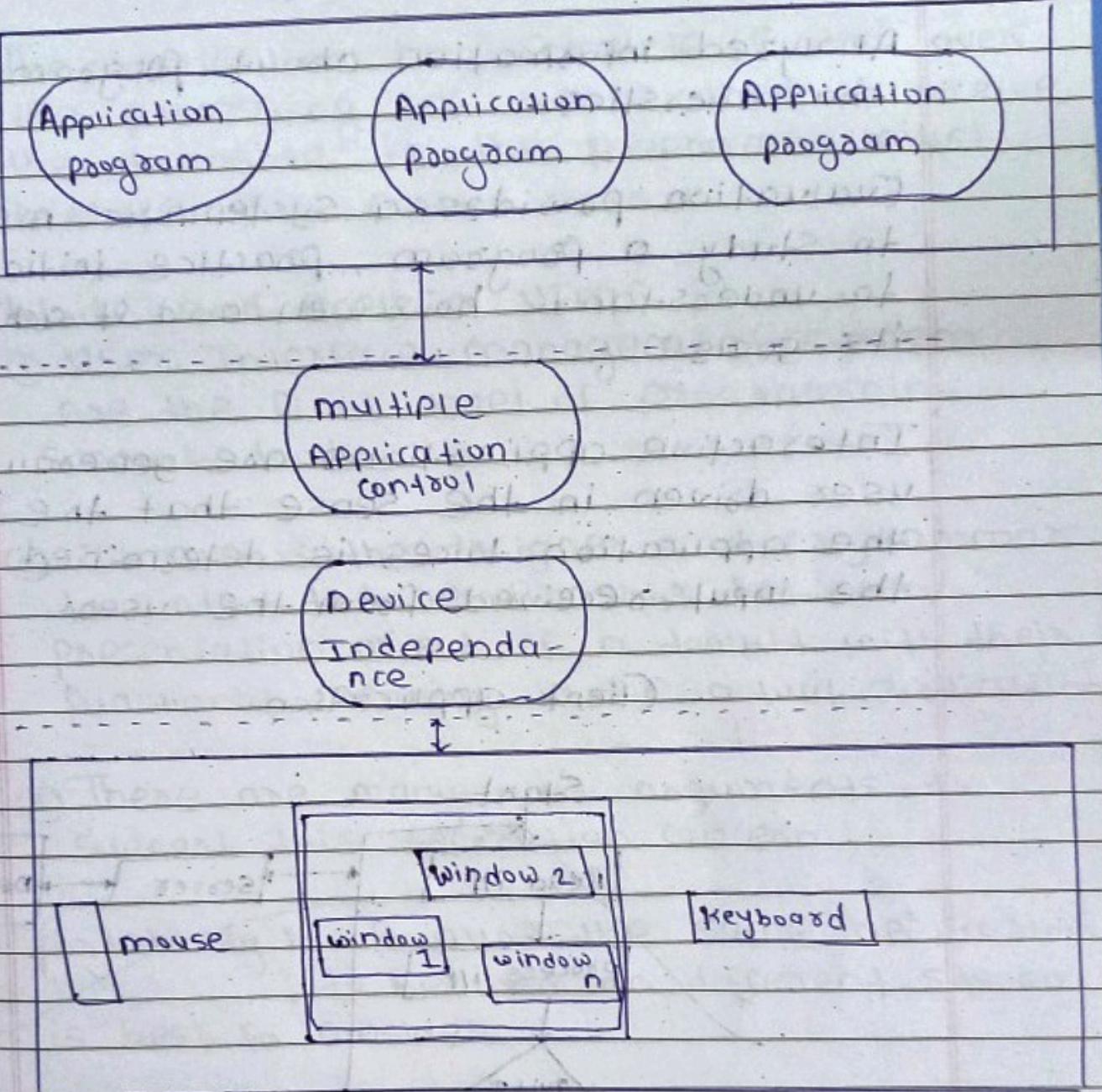


Fig- The role of windowing system.

2) Write and explain programming application in details.

→ Evaluation :-

It is the process that examines and analyzed the program, it involves collecting

Analyzed information about program activities characteristics.

Evaluation provides a systematic method to study a program, practice initiative to understand how well and it achieves its goals.

Interactive applications are generally user driven in the sense that the action the application takes is determined by the input received from the user.

Client application

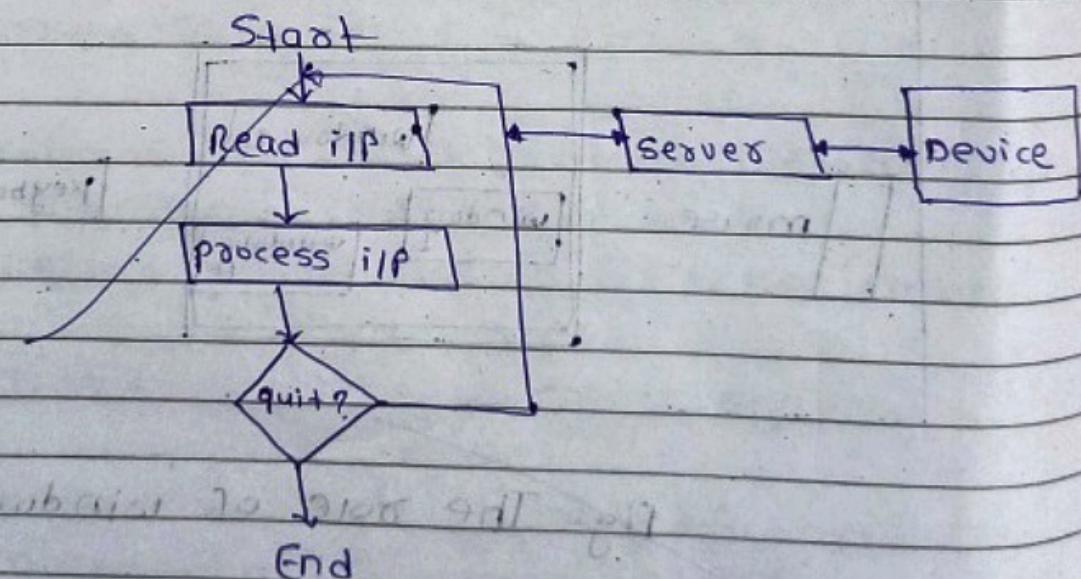


Fig. The read evaluate loop in

The application has complete control over the processing of events that it receives. The downside is the programmer must execute this control over.

3) Write and explain VIMS.

① User Interface management system are the final level of programming support tools.

② It allows the designer and programmers to control the relationship between presentation object of a toolkit with their functional meaning in the actual application.

③ There are many good arguments to support this separation concern.

1) Portability :- To allow the same application to be used on different system is best to consider.

2) Reusability :- Component can be reused in order to cut development cost.

3) Customization :- The user interface can be customized by both the designer & the user to increase its effectiveness without having to alter application.

- The logical components of VIMS:-

1) Presentation :-

This component is responsible for the appearance of the interface including what info is available to the user.

2) Dialog Control :-

This component regulates the communication between the presentation & the application.

3) Application Interface :-

The view of the application semantics.

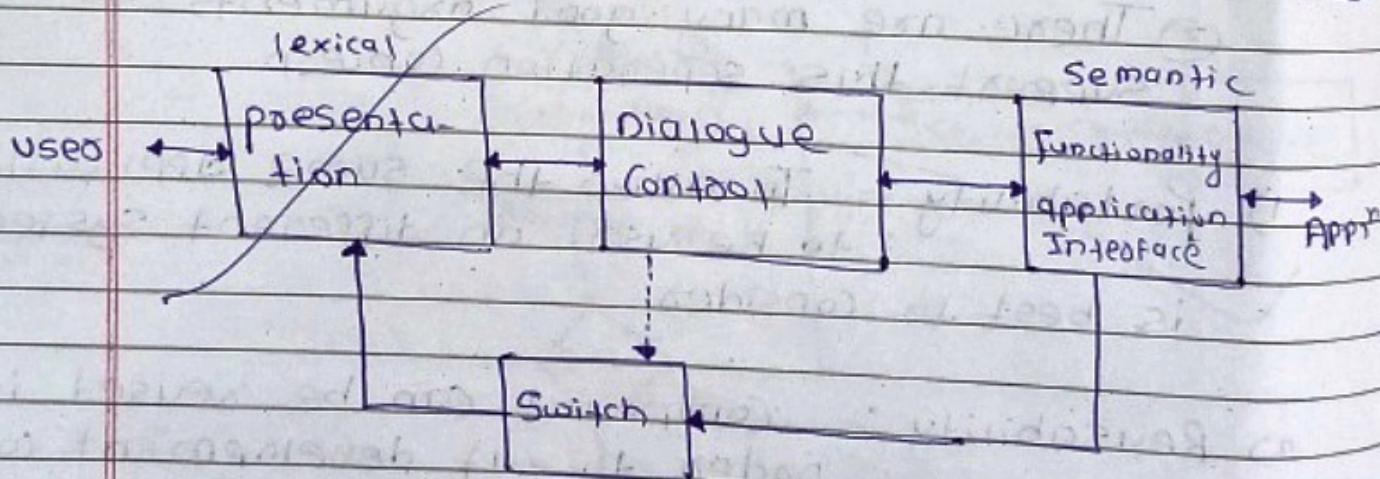


Fig- The Seeheim model of the logical components of a VIMS

4) What is evaluation and also explain goals of evaluation.

(1) A design process to support the design of usable interactive systems. even if such a process is used, we still need to access our design and test our systems to ensure that they actually behave as we expect & meet user requirements.

- * Goals of Evaluation :-
- To assess the extend and accessibility of the systems functionality.
- To assess user's experience of the interaction.
- To identify any specific problems with the system.
- To improve its effectiveness.
- To inform programming decisions.
- To learn its usability and the user's satisfaction with it.
- To identify specific problem with the design.

- The system's functionality is important in that it must accord with the user's requirement.
- The design of the systems should enable users to perform their intended tasks more easily.

5) What is universal design and also explain its principles.

- ① Universal design is designing systems so that they can be used by anyone in any situation.
- ② means the process of designing products so that they can be used by as many people as possible in as many situations as possible.
- ③ providing access to information through more than one mode interaction is an important.

* Principles of universal design :-

- 1) These designs are based on multimodal interaction.
- 2) Multimodal systems are those that use more than one human input channel in the interaction.

3) These systems may be + running !

i) Speech

ii) Non speech sound

iii) Touch

iv) Hand writing

v) Gestures

4) ~~Universal design means designing for diversity including people with sensory physical or cognitive impairment people of different ages. people from different background.~~

5) Write and explain user support requirement
~~16/10/23~~
 user supports - Their familiarity with the system, the job they are trying to do & so on.

These are four main types of assistance that user's require.

- quick reference
- task-specific help
- full explanation
- tutorial

- Requirement of user supports.

- 1) Availability :- The users needs to be able to access help at any time during his interaction with the system.
 - He should not have to quit the application.
- 2) Accuracy & completeness :- It may seem obvious to state that the assistance provided should be accurate & complete.
 - But in an age where applications are frequently update.
- 3) Consistency :- users require different types of help for different purposes.
 - This implies that a help system may incorporate a number of parts.
- 4) Robustness :- Help systems are often used by people who are in difficulty.
 - The system is behaving unexpected or has failed altogether.
- 5) Flexibility :- help system are rigid in that will produce the same help message regardless of the expertise of the person seeking help or the context in which they are working.

6) Unobtrusiveness :- The final principle for help system design is unobtrusiveness

The help system should not prevent the user from continuing with normal work.

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