

SE Management Activities, SE Development Activities

Complete each other

* I have to follow both processes
Time, budget, Quality

SE Development Activities

Verification & Validation, Integration Test

Req Specification (is Req Analysis) *
Planning (is SE Management Act.) *

→ can't delay this until Management & Development S

Team is out of our hands

Risk Management

① Risk Can be Management

② Risk Can't be Management

System Modeling (OO, UML)

Skills needed: Team Work, Easy Communication

Diagram

- * Mode will extend to include all "Schedule" جدول في Grand chart لـ أداء نافذة
- * include happens every time
- * Extend happen just sometimes

الحال بناء المحتوى مهم
Maintenancy 67% vs Cost

Requirements 3 Categories

- ① Req. Capture
- ② Req. Analysis
- ③ Req. Modeling

System Requirements Client needs
User requirements احتياجات المستخدم
User Req. لوجيcal User needs ملحوظات
System Req.

User need احتجاجات System Req. ملحوظات

1. User Req. و ملحوظات
 2. User need و User Req. احتجاجات
 3. Participation Design انتشار
- (Involve شركاء Client)

User Req. \Rightarrow User Output \Rightarrow Req. Capture \Rightarrow New System \Rightarrow User's Needs

Aim of Req. Capture

To find out from users what they require in the new system

\hookrightarrow meets the user need's

How?

- You must have a clear understanding both of the overall objectives of the business and of what it is that individual users of the system are trying to achieve in their job.

- You must avoid the defects exist in the current system.

Methods for Capturing Req.

Question) Do you think that detailed understanding of the current system is necessary? or Should an understanding of the current system be part of the req. analysis process of the new system?

النظام القديم System 1 يتحول إلى نظام New System (Is It Just Like That?)
نظام New System هل هو مماثل؟

Ans حالي SSADM \Rightarrow Researchers want to
دخل (Enter) System 1 (القديم) وفقط واحد
الحالات (Conditions) بعدها تقديم + الجدد (New) لوفروت
Conditions \Rightarrow Req_1 + ... + Req_n \Rightarrow New Req_1 + ... +

Legacy Systems \Rightarrow a lot of Many Many System but

Current Working

To old and Valuable Systems Must be Maintained
and Updated

SSADM (Structured System Analysis and Design Method)

SSADM Benefits

- Some of The functionality of The existing System will be Required in The New System
- Some of The Data in The existing System is of Value and Must be Transferred to The New System
- The existing System May have Defects which we Should avoid in The New System
- Studying The existing System will help us to understand The organization in General

New System Req.

3 Categories

① Functional Req.

② Non-Functional Req. (NFR)

③ Usability Req.

Req. Ull Capture طرق لعمل req

How To Investigate The Req. ?

FIVE fact-finding Techniques

→ Background Reading

→ Interviewing

→ Observation

→ Document Sampling

→ Questionnaires

وتحتاج لـ SQIRO وتحتاج لـ SWOT

لـ Capture طرق لعمل req

Which Is The best? Nothing Is The best

Qstn 18 Ques 18

Information gained From its use

- Advantages and DisAdvantages

- Situations in which it is appropriate to use

and (least) → Ques 18

Subject:

① Background Reading

Adv → Helps The analyst To get an understanding of The organization before Meeting The People who Working There الحال في الواقع

IS Docs الحالات والرسائل

DisAdv → Written Docs often Do Not Match up to Reality

Situations → Where The analyst Is Not Familiar with The organization being Investigated

- It is useful in The initial stages of investigation

② Interviewing → is The Most Widely used fact Finding Technique

Adv → Interviews Produce high Quality Information

- If The Interviewee has nothing To Say, The interview Can be Terminated

DisAdv → Interviews are Time-Consuming متعددة
The analyst

- Interview results require The analyst to work on Them after The interview (Writing up of Notes)

- If different Interviewees Provide Conflicting Information, it can be difficult to resolve later في وقت لاحق

Date: / /

التاريخ: / /

Subject:

موضوع الدرس:

③ Observation

Adv. Data are collected in real time

Used to verify information from other sources

Provides first-hand experience of the way

DisAdv. Most people don't like being observed and are likely to behave differently from the way in which they would normally behave

الذى يجتمع به سلوك وعادات صرافية ودار بحسب ما يحصل

Situations → observation is essential for gathering Quantitative Data about people's jobs

Quantitative Data & Qualitative Data

Observation, Interview, Questionnaire, etc. for Qualitative Data
Numerical Value, etc. for Quantitative Data

Stat. does, Numerical for Quantitative Data
Language, Story, etc. for Qualitative Data

= Mixed Method Research, ~~and cannot be mixed~~

④ Document Sampling

- Used in 2 different ways
- ① The analyst will collect copies of blank and completed documents during the course of interviews and observation sessions.
 - ② The analyst may carry out a statistical analysis of doc in order to find out about patterns of data

Adv - Can be used to get the quantitative data

Can be used to find out about error rates in paper docs.

DisAdv - If the system is going to change dramatically, existing docs may not reflect how it'll be in future.

⑤ Questionnaires

will ask questions related to problem

Types of Ques

- ① Yes / No
- ② Multiple Choice (MCQ)
- ③ Scaled Question used if the answer involves an element of subjectivity
- ④ Open-ended

المحاجة (كتب الحوال) بطرقه كلها (ن) و الناس (ج) يجيب
عليه واقرئ (أمثل Culture و Culture) (ج) مختلف يابكيني

System Usability Skill (SUS)

Expectation \otimes Satisfaction \rightarrow Perception

نظام Testing هو لغز SUS و هو System Testing System هو لغز SUS و هو لغز Testing

Req II Capture Justified Questions is (جواب
دستورات) Testing II Justified Questions

Non-Functional Req. Categories

① Category No. 1

- ↳ observable
 - ↳ Measurable

④ Easy To Collect

② Category No. 2

- ↳ Non-observable
↳ Non-Measurable

To Make Difficult To

NFR Category 1

To Performance \Rightarrow The Responsiveness of The System

Ex) Response Time

↳ Security → The Capability of Securing The System

unauthorized use

Availability → The Proportion of Time The System is available to users ^{وقت متصفح المتصفح}

Reliability → The ability to Perform The functionality Consistently and recover from failure as necessary

Maintainability ^{ال Ease of}

Capacity → The Capability of The System To handle The resources, Volume, etc. and Required growth

Usability → The ease of use of The System With The User's capabilities ^{User's capabilities}

NFR is ~~not~~ ^{is} Subs to JS

NFR Category 2.

↳ Maintainability → The ease with which The System Can be changed

↳ Portability → The ease with which The System Can be Ported to alternative operating environments

↳ Integrity → The ability of The System To Preserve Transactions accurately and persistently

↳ Scalability → The Ease with which The System Can Handle increased Volumes

↳ Manageability → The Ease With which The System Can be Managed and organized During its operation

↳ Safety → The Capability of The System to Not harm Users or others

↳ Efficiency → The assessment of How well The System utilizes Resources

Simple & Easy to use وأبسط وأسهل Usability ال Ease of Use
 "اح��یت حکمیت" engagement almost User العکیتی ایجکیمینگنیتی ISW6
 Emotional émotional in coffer Emersion و ایمیریشن

{ Good & Affect DDF3 Good & مزاجی & اچر سُنّہ & اچر سُنّہ
 Fun Reg Fun Reg انڈر بیسیڈ سیستم و دیگر سیستم
Non-Fun Reg

How To Differentiate Between NFR and Functional
Reg

Fun Reg so it is often suggested that anything
that is phrased in Non-Verb form is at least
functional Reg

Non-Verb Form و جیسے fun Reg میں

NFR - are expressed with adverbs of
adverbial modifying clauses

adverbs اویس، جیسے NFR حرکتی

ISO, securely or quickly + vj

function Reg لیا کرنا ماقبلی

