

Models and Modeling

Lec 3
SA1

← ثاني خطوة بعد ال requirement gather ال requirement define ودي بتتم عن طريق ال modeling

← اجنا شغالين ال Object Oriented SA فبنستخدم ال UML واهمهم class diagram

← ال model في الدنيا هو represent حاجة Complex عايز افهمها يعني ال model وعبرة عن ايه

Models Types

→ Textual: عبارة عن text زي مثلا:
List of steps of how to hire an employee
يمكن event List و represent ال usecases كشكل scenario
بتكلم عن ال post وال pre Conditions
مست محبة الاستخدام عشان بيأخذ وقت في الفهم

→ Graphical model: كدال diagrams ال بيأخذها في ال SE.1

→ Mathematical model: على هيئة equations او formulas زي
ال prediction وال regression model
بيعمل حاجة اسمها feature data اشوف ال property بتأثر في ال price ولا
واكتب equation تفهمك الوضع
$$F_y = a_0 + a_1x_1 + a_2x_2 + a_3x_3$$

↓ price ↓ weight ↓ feature

* اغلب الشغل على ال graphical

Reasons For modeling

→ عن طريق بناء usecases مثلا والدنيا بتبان سهلة reduce complexity

→ Communication tool

- Stakeholders
- users
- development team members

→ Documentation بعد إضافته لأي حاجة أو تعديل/تحسين

- * Maintenance: صيانة
add feature over time
- * Enhancement: تحسين أداء ال system
و ممكن يكون لازم مش نشغل على الجزء ده و مش فاهم لازم افهمه

Activity Model

→ Model the workflow (steps to process user request)

* ال Business process عبارة عن steps وال Business في الآخر عبارة عن Business processes

→ A UML Diagram

→ graphical model of a workflow

* انت مش بتثبت ال diagram بتخالف ال steps على حسب كل system.

* ال Reading ← Extra انت مطالب بيها

Interviewing Users and Other Stakeholders

- Prepare detailed questions
- **Meet with individuals or groups of users** اعمل interview مع كل الموظفين مع بعض
- Obtain and discuss answers to the questions
- Document the answers
- **Follow up as needed in future meetings or interviews**

Preparing for the Interview (1 of 2)

Before

- Establish the objective for the interview. الهدف
- Determine correct user(s) to be involved. مقابل مين
- Determine project team members to participate. مستخد فع مين
- Build a list of questions and issues to be discussed. احضر الاسئلة
- Review related documents and materials. استوف المواد materials
- **Set the time and location.** احدد معاد و مكان المقابلة
- Inform all participants of objective, time, and locations. اعرف باقي الـ يوم

During

- Arrive on time. اوصل على الوقت
- Look for exception and error conditions. ادور على الحالات الاستثنائية
- Probe for details. اعصر الـ user
- **Take thorough notes.** اكتب وراه
- Identify and document unanswered items or open questions.

Themes for Information Gathering Questions CamScanner Ma طرق للاستئلة القريبة لـ user

Theme	Questions to users
What are the business operations and processes?	What do you do?
How should those operations be performed?	How do you do it? What steps do you follow? How could they be done differently?
What information is needed to perform those operations?	What information do you use? What inputs do you use? What outputs do you produce?

Preparing for the Interview (2 of 2)

After

- Review notes for accuracy, completeness, and understanding. راجع الى تدريتي
- Transfer information to appropriate models and documents.
- Identify areas needing further clarification.
- Thank the participants. تكرمهم
- **Follow up on open and unanswered questions.** راجع الى مستجوابين

مثال

Discussion and Interview Agenda

Before

Setting

Objective of Interview

Determine processing rules for sales commission rates

Date, Time, and Location

April 21, 2016, at 9:00 a.m. in William McDougal's office

User Participants (names and titles/positions)

William McDougal, vice president of marketing and sales, and several of his staff

Project Team Participants

Mary Ellen Green and Jim Williams

Keeping an Open Items List

الى مختلص

ID	Issue title	Date Identified	Target end date	Responsible project person	User contact	Comments
1	Partial shipments	6-12-2016	7-15-2016	Jim Williams	Jason Nadold	Ship partials or wait for full shipment?
2	Returns and commissions	7-01-2016	9-01-2016	Jim Williams	William McDougal	Are commissions recouped on returns?
3	Extra commissions	7-01-2016	8-01-2016	Mary Ellen Green	William McDougal	How to handle commissions on special promotions?

During
After

Interview/Discussion

1. Who is eligible for sales commissions?
2. What is the basis for commissions? What rates are paid?
3. How is commission for returns handled?
4. Are there special incentives? Contests? Programs based on time?
5. Is there a variable scale for commissions? Are there quotas?
6. What are the exceptions?

Follow-Up

Important decisions or answers to questions

See attached write-up on commission policies

Open items not resolved with assignments for solution

See Item numbers 2 and 3 on open items list

Date and time of next meeting or follow-up session

April 28, 2016, at 9:00 a.m.

تلكة ال interview في
time Cost
كدة خبرينا ال questionnaire

Distribute and Collect Questionnaires

طريقة اخرى لجمع المعلومات وهي

جزئين جزء open
محتاج لا user الكتابية

وجزء closed زي
ال mcq متعدد الاسئلة
والاجابات المتاحة و
ده مفضل عشان ال user
خلقه ضيق

RMO Questionnaire

This questionnaire is being sent to all telephone-order sales personnel. As you know, RMO is developing a new customer support system for order taking and customer service.

The purpose of this questionnaire is to obtain preliminary information to assist in defining the requirements for the new system. Follow-up discussions will be held to permit everybody to elaborate on the system requirements.

Part I. Answer these questions based on a typical four-hour shift.

1. How many phone calls do you receive?
2. How many phone calls are necessary to place an order for a product?
3. How many phone calls are for information about RMO products, that is, "Questions only?"
4. Estimate how many times during a shift customers request items that are out of stock.
5. Of those out-of-stock requests, what percentage of the time does the customer desire to put the item on back order?
6. How many times does a customer try to order from an aspired catalog?
7. How many times does a customer cancel an order in the middle of the conversation?
8. How many times does an order get denied due to back order?

Part II. Circle the appropriate number on the scale from 1 to 7 based on how strongly you agree or disagree with the statement.

Question	Strongly Agree	Strongly Disagree
It would help me do my job better to have longer descriptions of products available while talking to a customer.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
It would help me do my job better if I had the past purchase history of the customer available.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
I could provide better service to the customer if I had information about accessories that were appropriate for the items ordered.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
The computer response time is slow and causes difficulties in responding to customer requests.	1 2 3 4 5 6 7	1 2 3 4 5 6 7

Part III. Please enter your opinions and comments.

Please briefly identify the problems with the current system that you would like to see resolved in a new system.