



A large, abstract geometric background composed of numerous white and light gray triangles, creating a sense of depth and perspective.

Use Case Specification

APSI-UML

erik@uniku.ac.id



Memahami use case spesification

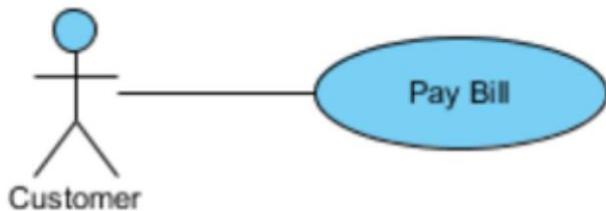
Membuat use case spesification

Spesifikasi use case biasanya dibuat dalam tahap analisis dan desain secara berulang

- ❖ Pada awalnya, hanya penjelasan singkat tentang langkah-langkah yang diperlukan untuk menjalankan aliran normal use case (yaitu, fungsionalitas apa yang disediakan oleh use case) yang ditulis.
- ❖ Seiring kemajuan analisis, langkah-langkah tersebut disempurnakan untuk menambah lebih banyak detail.
- ❖ Terakhir, aliran luar ditambahkan ke use case.
- ❖ Setiap proyek dapat mengadopsi template use case standar untuk pembuatan spesifikasi use case.

Use Case vs Use Case Specification

Use case diagram



Use case specification

Use Case: Pay bill

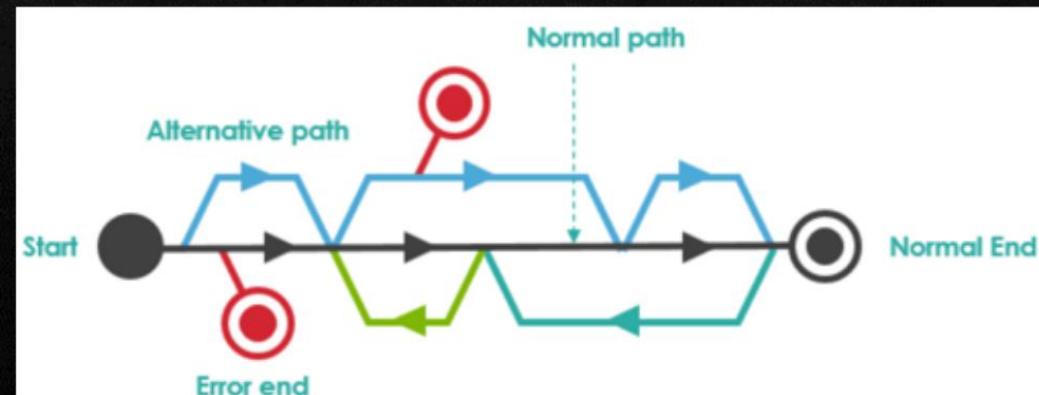
- Description
- Pre-condition
- Post-condition
- Basic path
- Alternative paths
- Exception paths

- ❖ Use Case (task - a customer want to perform) may be:
 - ❖ **Interaktif** - sistem use case yang menggambarkan interaksi aktor dengan sistem dalam mencapai tujuan bisnis yang ditentukan
 - ❖ **Manual** - Urutan tindakan yang dilakukan oleh seorang aktor
 - ❖ **Otomatis** - Urutan langkah yang dilakukan oleh program atau skrip

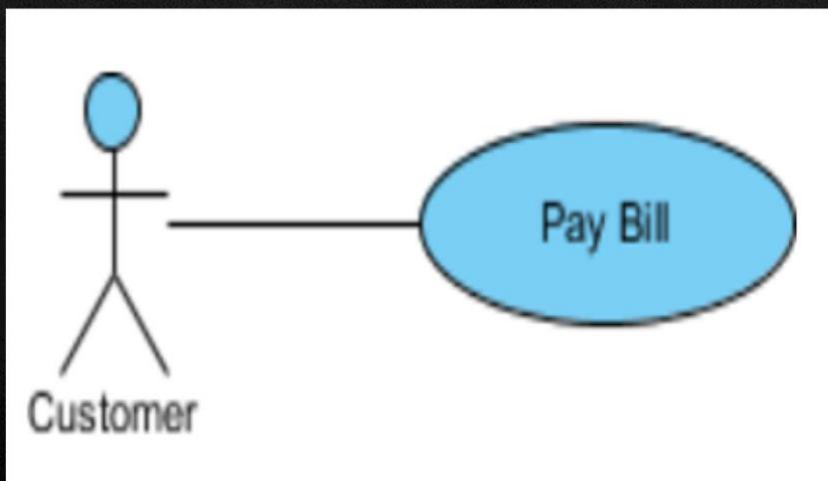
Characteristics of Use Cases

- ❖ A use case has:
 - ❖ Only one goal
 - ❖ A single starting point
 - ❖ A single ending point
 - ❖ Multiple paths for getting from start to finish

- ❖ yaitu Tentukan perilaku untuk berbagai kemungkinan kondisi
- ❖ Setiap kondisi mungkin memerlukan tindakan spesifik



Contoh : Customer pay bill



- ❖ There are multiple paths to achieve the goal:
 - ❖ Telephone payment
 - ❖ By mail
 - ❖ In person
 - ❖ by check
 - ❖ by cash, etc.

- ❖ A path that does not lead to the goal:
- ❖ Credit card is declined

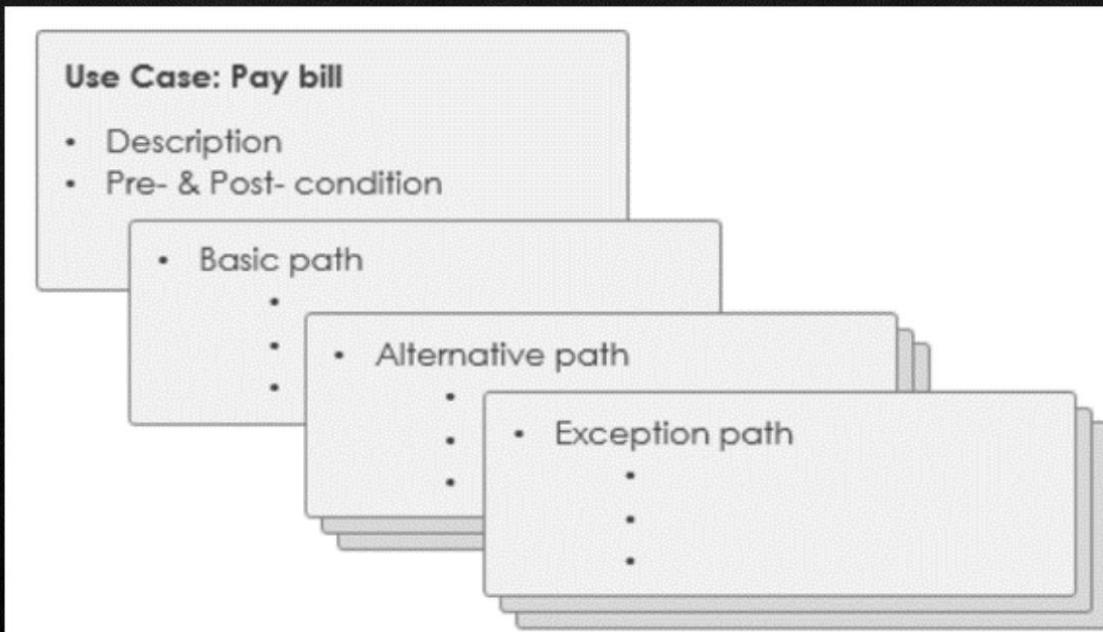
x

Agile Use Case Approach

- ❖ Model use case dan use case individualnya berkembang tingkat demi tingkat seiring berjalannya waktu. Tidak semua use case suatu model perlu ditentukan pada tingkat detail yang sama.

- ❖ Use Case dapat ditulis pada tingkat data dan cakupan yang berbeda, masing-masing memiliki tujuan:
 - ❖ Summary: Deskripsi umum dan ikhtisar menyeluruh tentang fungsionalitas sistem atau proses bisnis.
 - ❖ Tingkat Pengguna : Deskripsi pengguna terkait tugas dan cara mereka berinteraksi dengan sistem; deskripsi proses bisnis tertentu. Kasus penggunaan Tingkat Pengguna biasanya dianggap berada pada tingkat tugas yang menjadi pekerjaan utama pengguna.
 - ❖ Misalnya: mengeluarkan uang tunai dari mesin ATM adalah tugas yang berguna dan akan menjadi use case pada tingkat inti, namun memasukkan nomor PIN Anda tidak akan berada pada tingkat ini, karena mendukung pekerjaan utama.
 - ❖ Subfungsi: Deskripsi aktivitas tingkat rendah yang digunakan untuk menyelesaikan subbagian kasus penggunaan inti.

Detailed Use Case Specification



Use Case Template - ATM withdraw case example

Use Case Specification

Use Case Name:	Withdraw Cash
Actor(s):	Customer (primary), Banking System (secondary)
Summary Description:	Allows any bank customer to withdraw cash from their bank account.
Priority:	Must Have
Status:	Medium Level of details
Pre-Condition:	The bank customer has a card to insert into the ATM The ATM is online properly

Post-Condition(s):

- The bank customer has received their cash (and optionally a receipt)
- The bank has debited the customer's bank account and recorded details of the transaction

Basic Path:

1. The customer enters their card into the ATM
2. The ATM verifies that the card is a valid bank card
3. The ATM requests a PIN code
4. The customer enters their PIN code
5. The ATM validates the bank card against the PIN code
6. The ATM presents service options including "Withdraw"
7. The customer chooses "Withdraw"
8. The ATM presents options for amounts
9. The customer selects an amount or enters an amount
10. The ATM verifies that it has enough cash in its hopper
11. The ATM verifies that the customer is below withdraw limits
12. The ATM verifies sufficient funds in the customer's bank account
13. The ATM debits the customer's bank account
14. The ATM returns the customer's bank card
15. The customer takes their bank card
16. The ATM issues the customer's cash
17. The customer takes their cash

Alternative Paths:

- 2a. Invalid card
 - 2b. Card upside down
 - 5a. Stolen card
 - 5b. PIN invalid
 - 10a. Insufficient cash in the hopper
 - 10b. Wrong denomination of cash in the hopper
 - 11a. Withdrawal above withdraw limits
 - 12a. Insufficient funds in customer's bank account
 - 14a. Bank card stuck in machine
 - 15a. Customer fails to take their bank card
 - 16a. Cash stuck in machine
 - 17a. Customer fails to take their cash
-
- a ATM cannot communicate with Banking System
 - b Customer does not respond to ATM prompt

Business Rules:

- B1: Format of PIN
- B2: Number of PIN retries
- B3: Service options
- B4: Amount options
- B5: Withdraw limit
- B6: card must be taken away before dispense of cash

Non-Functional Requirements:

- NF1: Time for complete transaction
- NF2: Security for PIN entry
- NF3: Time to allow collection of card and cash
- NF4: Language support
- NF5: Blind and partially blind support

Terima kasih

❖ visual-paradigm.com