Generating Test Cases #1

Requirements

- In traditional development, during the analysis phase, the software analysts work with customers to define software specifications.

- Then, the testers take the specification and develop test cases.

Interaction with customers

- An agile team does not develop comprehensive requirements before working on the software.

- For each feature, they work with the customers to make sure that they deliver the useful functionality in the way that the customers want.

Acceptance testing

- The only "useful" product of an agile team is the working software.

- One way to show that the software is working properly is through testing.

  - This shows the team that they are doing something right.

  - This also proves to the customer that they are getting the correct software.

How

- The team works with the customers to define acceptance tests for each feature.

- We will demonstrate the process through a sample dialogue.

Story

- The team is working on a hotel room reservation software that let users book rooms on-line.

- They are looking at how the hotel staff allocate "free" time slots between two consecutive events that use the room.

Casts

- Developer: Mary
- Tester: Dave
- Customer: Tom

Scene #1a

- **Dave:** Tom, can you tell use about the free time slot between two events using the room? Why do you need it?

- **Tom:** Before each event, the room must be set up. Also, if it was used in, say, a wedding ceremony, then a big clean up must be performed. Therefore, we need to allocate small free time so that our staff can work.

Scene #1b

- **Mary:** Great. We observe that you allocate different time spans for different rooms and different events. Can you tell us how do you decide the right time amount to allocate? What are the factors you use to decide?

Scene #1b - detailed

- **Mary:** Great. We observe that you allocate different time spans for different rooms and different events.

  Can you tell us how do you decide the right time amount to allocate?

  What are the factors you use to decide?

Scene #1c

- **Tom:** We look at the events. Different events require different times to set up and clean up. Also, bigger rooms need more time, so room size is also a factor.

Dave's head

- What should Dave be thinking right now?

Scene #2a

- **Dave:** Let's talk about room sizes and event types. Let's start with room sizes because it might be easier. How many room sizes do you have?

- **Tom:** There are many rooms that we rent, but we categorize them into large, medium, and small rooms.

Dave's head

- There will be many event types.

- Then there will be so many combination of event and room sizes. Maybe there's a general rule?

Scene #2b

- **Dave:** Do you have any general rules to estimate the time needed for rooms with different sizes?

- **Tom:** We do not have exact rules.

- **Dave:** You can just tell us roughly how you decide.

- **Tom:** Usually, small rooms need 80% time of the medium rooms, and large rooms need 150% time of the medium rooms. But this is not true for weddings.

- **Dave:** OK. So before talking about event types, let's me try to sketch things up.

Table 1

Room size	Small	Medium	Large
Time needed	80% *Not true for weddings	100%	150% *Not true for weddings

Scene #3a

- **Mary:** How many event types do you have?
- **Tom:** Basically, we host weddings, conferences, and parties.
- **Mary:** Parties?
- **Tom:** Yes, like new year parties.
- **Dave:** OK

Dave's head

- Are there any other types of events?

Scene #3b

- **Dave:** Only 3 types?
- **Tom:** There might be other types, but for that we do not have specific rules.
- **Dave:** So how are we going to do that in our software?
- **Tom:** Ummm

Scene #3c

- **Mary:** So how about this? For the current iteration, we just allow users to book the rooms on-line with only 3 types of events. Does this cover a large group of users you expect?

- **Tom:** That's ok. That should be 90% of the possible users. For other types of events, you can just tell the user to contact the hotel staff.

Scene #4a

- **Dave:** Do you have specific time required for these events? Let's start with medium rooms.

- **Tom:** Yes, we estimate that for conference, it will take 30 minutes to set up and 30 minutes to clean up.
  For weddings, 1:30 hour to set up and 1 hour to clean up, and for parties, 30 minutes to set up and 2 hours to clean up.

Scene #4b

- **Dave:** So to calculate the free time between events, you just added the required times to set up and clean up?

- **Tom:** Yes.

- **Dave:** OK, please take a look at this table. Does it look OK? Times are in minutes.

Table

Case	Small	Medium	Large
Party then conference	120	150	225
Conference then party	48	60	90
Wedding then Party		90	
Wedding then Conference		90	
…. (other cases)			

Scene #5a

- **Tom:** That looks fine, except that 225 minutes doesn't make sense.

- **Dave:** Why?

- **Tom:** We would round up to half hours.

- **Dave:** OK, so that goes to 4 hours. Let's see the update.

- **Tom:** That looks good.

Table

Case	Small	Medium	Large
Party then conference	120	150	240
Conference then party	48	60	90
Wedding then Party		90	
Wedding then Conference		90	
… (other cases)			

Scene #6a

- **Mary:** Let's talk about weddings in small rooms and large rooms.

- **Tom:** OK.