

# Task 2 - Hotel reservation system

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## 2. Attributes, Components and Capabilities

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### Attributes

1. Secure - working with personal data / money transactions
2. Reliable - no random reservation cancellations (when customer arrives, he gets the exact room he reserved)
3. Available - should be available at any time in case of some problem with reservation after arriving
4. Usability / Transparency - simple reservation which is transparent for the user
5. Credibility - payments reach end-point hotels
6. Stability - any failure of the system cannot influence booked reservations
7. Extensibility - adding new hotels, new features

### Components

8. Registration and Login
9. Payment
10. Reservation
11. Cancellation & cancellation policy
12. Search
13. Hotel rating - Customer reviews
14. Hotel & property policies
15. Call center
16. Refund system
17. Error logging
18. Suggestions system
19. Filtering
20. Favourites
21. Top destinations
22. Subscriptions

### Capabilities

23. Secure Registration
  - test that valid and unique registration passes
  - test that invalid registration gets adequate error information
  - test that registration is secure and cant be attacked by injection, XSS or XSRF code

## 24. Secure Reservation

- test that correct reservation passes
- test that outdated reservation fails and the system informs customer about changes
- test that reservation from unregistered user redirects the user to registration

## 25. Secure Cancellation

- test that cancellation passes until deadline
- test that cancellation fails after deadline
- test that passed cancellation for paid reservation gives customer the right to ask for the refund

## 26. Secure Refund

- test that refund request is saved into system
- test that refund confirm transfers the correct amount to customer
- test that after refund refusal system notifies customer by email

## 27. Secure Payment

- test that payment info is stored in database
- test that payment amount is double-checked on server-side
- test that payment modules are accessible (paypal etc.)

## 28. Secure Customer review

- test that no harm code gets processed from the review form
- test that valid review passes
- test that invalid review informs customer about the errors

## 29. Reliable Hotel search

- test that search returns results for existing hotels
- test that search with no results allows user to search by filter
- test that no harm code gets processed from the search form

## 30. Display for the apartment - photos / virtual walk

- test that gallery can be opened
- test that image slider reacts to swipe events (for mobile devices)
- test that gallery administration tool can add/remove photos

## 31. Hotel image gallery - common areas

- same as apartment photos

### 32. Reliable and transparent reservation for the user

- test that valid registration proceeds
- test that invalid registration informs about the errors
- test that no harm code gets processed or saved to database

### 33. Extensible reservation

- test that reservation can be extended by partial payment
- test that no more than one extension can be used
- test that cancellation of extended reservation allows to refund the right amount of money

### 34. Transparent refund system

- test that refund button is shown in the profile after cancellation of the paid reservation
- test that refund request shows status in profile
- test that refund response shows status in profile

### 35. Stable cancellation

- test that customer can cancel reservation freely before payment
- test that cancelled reservation enables other customers to make the same reservation
- test that cancellation after payment navigates user to refund page

### 36. Transparent and credible payment

- test that payment can be done by one-click functionality for accounts with payment options filled
- test that status is shown in profile after payment
- test that status is shown after payment confirmation

### 37. Extensible suggestion system

- test that suggestion button redirects user to suggestions page
- test that search with no results shows suggestions according to profile and interests / favourites
- test that search with no results allows to further filter received suggestions

## 3. Clusters of the biggest risks

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### 1. Reservation

- not adhered from the hotel side
- not propagated to the hotel
- Secure reservation
- Stable reservation

- Transparent reservation
  - Reliable reservation
  - Credible reservation
2. Unability to locate hotels in the area
- potential loss of customers
  - Reliable hotel search
  - Extensible search
  - Extensible filtering
  - Available search
  - Stable search - same / similar results for same queries
3. Internal payment errors
- user pays, reservation is successful but the hotel won't receive payment
  - Secure payment
  - Transparent payment
  - Credible payment
  - Stable payment
  - Reliable payment
4. Data loss / theft
- i. Secure payment
  - ii. Secure registration
  - iii. Secure data transfer (e.g. to the hotels)
  - iv. Secure subscription
  - v. Secure data storing
5. Hotel partners
- providing sufficient and valid information
  - Transparent customer reviews
  - Detailed hotel information
  - Responsive photo gallery
  - Accessible contact information
  - Our own recommendations
6. Competition
- Other booking systems
  - Flight suggestion system
  - Hotel-Customer communication system
  - Nearby attractions / destinations (culture) system
  - 360 view - either hotel / apartment gallery or close range streetview
  - Weather forecast