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## 4 Simple steps to create Requirement Traceability Matrix (RTM) – Free Sample to download

[Shilpa](#) September 19, 2018 [Software Testing](#) [33 Comments](#)

Requirement Traceability Matrix (RTM) is a table (mostly a spreadsheet) which shows if each requirement has a respective Test case / cases to make sure if the requirement is covered for testing.

It is basically used to ensure that ALL the requirements and Change Requests are or will be tested.

### Advantages of Requirement Traceability Matrix (RTM):

1. Gives Overview of ALL the requirements
2. Shows how requirements are linked to Test Cases
3. Makes sure 100% coverage of requirements
4. Easy to prepare
5. No special tool is required

### How to prepare Requirement Traceability Matrix (RTM):

1. Get all available requirement documents. For eg. Business Requirement Document(BRD), Functional Requirement Document(FSD), Technical Requirement Document(TSD)
2. First list down All the requirements from BRD one by one with requirement ID#

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3. Now go to FSD, and list all respective functional requirements for each Business Requirements
4. Open Test Scenario or Test Case document and link available TC IDs to respective Functional Requirements

Lets take an example:

**Project:** Online Flight Booking Application

## Business Requirement Document (BRD) :

*This document is provided by Client with high level business Requirements. Suppose for Flight Booking Application it shows below 2 requirements*

### **BR\_1 Reservation Module :**

*It should allow user to book one or more tickets, one way or round way for future dates*

### **BR\_2 Payment Module:**

*User should able to make payment for booked tickets via Credit / Debit Card or through Reward Points*

## Functional Specification Document (FSD) :

*This document is prepared by Technical team which further elaborate business requirements into functional requirements that can be implemented in a software.*

*Suppose above 2 business requirements in BRD have more detailed functional requirements:*

### **BR\_1 Reservation Module :**

- **FR\_1 : One Way Ticket booking**
  - *It should allow user to book one way ticket*
- **FR\_2 Round Way Ticket**
  - *It should allows user to book round way ticket*
- **FR\_3 Multicity Ticket booking**

- *It should allows user to book one way or round way ticket for multiple cities*

## **BR\_2 Payment Module:**

- **FR\_4: By Credit Card**

- *It should allows user to make payment by Credit Cards*

- **FR\_5 By Debit Card**

- *It should allows user to make payment by Debit Cards*

- **FR\_6 By Reward Points**

- *It should allows user to make payment by Reward Points*

And you have written some test cases or test scenarios for each functional requirement.

Test Case ID#	Test Case Description
TC#001	Verify if user is able to book one way ticket
TC#002	Verify if user is able to book multiple one way tickets
TC#003	Verify if user is able to book round way ticket
TC#004	Verify if user is able to book multiple round way tickets
TC#005	Verify if user is able to book one way ticket for multiple cities
TC#006	Verify if user is able to book round way ticket for multiple cities
TC#007	Verify if usre is able to pay by Master Card
TC#008	Verify if usre is able to pay by Visa Card
TC#009	Verify if usre is able to pay by Debit Cards
TC#010	Verify if usre is able to pay Fully by Reward Points
TC#011	Verify if usre is able to pay partially by Reward Points

So if we prepare simple Requirements Treaceability Matrix (RTM) for above example it would like as below:

REQUIREMENTS TRACEABILITY MATRIX					
Project Name: Online Flight Booking Application					
Business Requirements Document BRD		Functional Requirements Document FSD		Test Case Document	
Business Requirement ID#	Business Requirement / Business Use case	Functional Requirement ID#	Functional Requirement / Use Case	Priority	Test Case ID#
BR_1	Reservation Module	FR_1	One Way Ticket booking	High	TC#001 TC#002
		FR_2	Round Way Ticket		TC#003 TC#004
		FR_3	Multicity Ticket booking	High	TC#005 TC#006
BR_2	Payment Module	FR_4	By Credit Card	High	TC#007 TC#008
		FR_5	By Debit Card	High	TC#009
		FR_6	By Reward Points	Medium	TC#010 TC#011

You can also add Execution Status and Defects columns in RTM to view overall status of all requirements along with Test Cases.

Please download free sample RTM Template from here.



Please feel free to ask if any doubt in this article or anything related to Software Testing.

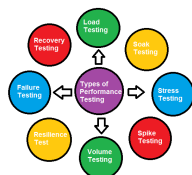
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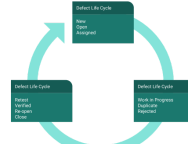
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## 33 Comments



**koushik**

August 26, 2019 | [Reply](#)

Hi,

Can we map the same test case for multiple requirements in the traceability matrix??

for eg. if we have a login functionality at beginning of the application and there is a guest login even so the user can click on guest login and then inside the app he can even login which resembles the same functionality having at beginning of the application



**Gaurav**

August 20, 2019 | [Reply](#)

I have a question, Is this matrix used to map test cases with BRD? Is my understanding correct?



**Shilpa**

August 21, 2019 | [Reply](#)

Yes, you are right Gaurav !

Author



**Pragnesh**

May 16, 2019 | [Reply](#)

Good article!!

Easy to understand RTM.

Keep it up...



**Shilpa**

May 16, 2019 | [Reply](#)

Thanks!

Author



**Joe C**

May 9, 2019 | [Reply](#)

Hello, great article. Would you agree that it is a best practice to exclude systems or other technical references in user requirements, and instead include those details in the traceability matrix (RTM) and design specifications (FSD)? E.g. screen, page, system ABC. I can't find a reference to back up my assumption.

**Vaishali**January 31, 2019 | [Reply](#)

If we already create a RTM and then we received a new requirement so how we can edit or how we can add this in our existing RTM....?

**Shilpa**February 12, 2019 | [Reply](#)

Yes..

Anytime!

You will have to maintain the versions for that.

Author

**NS**January 29, 2019 | [Reply](#)

How do we use this in Agile implementation? We do not specifically have BRDs or functional specifications. We have features and it has multiple User stories linked to it. Each User story has an acceptance criteria.

**Shilpa**February 12, 2019 | [Reply](#)

One of the features Agile does is minimal documentation.

So most of the time we don't need RTM.

But if asked, you can try with user stories only and then TCs.

Author

**DK**January 3, 2019 | [Reply](#)

Query: Seems if we are tracing from requirements specs, only system test cases will be included here. Can this be broadened to include traceability to design document specification ids and further also include traceability to unit test cases and integration test cases?

**Shilpa**January 3, 2019 | [Reply](#)

Glad you thought this way !

Yes definitely we can. It all depends on to which

Author

level we need to trace requirements.  
And, Unit TCs will be traced by developers  
mostly

**Susan**June 13, 2018 | [Reply](#)

Hello would you happen to have an example of RTM required by the Food and Drug Administration (FDA) to obtain clearance for a medical device? They refer to it as a Traceability Analysis. Thanks.

**Shilpa**

Author

June 14, 2018 | [Reply](#)

Hello Susan,  
We don't have specific example for FDA, but we have provided the simple steps and Sample RTM Format which you can download and use easily for your requirements.  
Hope this helps !  
Please let me know if you need more info.

**Siddarth Patil**June 26, 2018 | [Reply](#)

Hello Susan,  
  
I am also researching information about documentation for medical device as per IEC 62304. Do we really need Traceability Analysis? And I need some more information about the documentation, would you be kind enough to share some information please?

Thanks  
Sid

**Divya**June 11, 2018 | [Reply](#)

That was clear and precise. Thanks. Have you also made the test plan for this?

**Shilpa**

Author

June 12, 2018 | [Reply](#)

Divya, glad you found it useful !  
Yes we have provided steps to write Simple & Effective  
Test/QA Plan with **Sample Test Plan Report to  
Download**  
<https://www.opencodez.com/software-testing/test-planning.htm>  
Hope this helps !

**mahesh**June 9, 2018 | [Reply](#)

Thank you. The way you elaborated the topic is stupendous !!!!

**Shilpa**June 10, 2018 | [Reply](#)

Thank you so much Mahesh !

Author

**djay**May 31, 2018 | [Reply](#)

Thanks Shilpa for this great article.

**Shilpa**May 31, 2018 | [Reply](#)

Thanks djay!  
Glad you find it useful.  
Keep Visiting, Keep Reading, Keep Learning!

Author

**komal**April 4, 2018 | [Reply](#)

Mainly who creates RTM?

**Vijay**January 31, 2018 | [Reply](#)

Please explain about Test plan with an example

**Pavan**February 3, 2018 | [Reply](#)

Hi Vijay,  
Did you check our article –  
<https://www.opencodez.com/software->



[testing/test-planning.htm](#)

Let us know if this helps you.



**Rama**

January 30, 2018 | [Reply](#)

Good one.Thank you



**bala**

January 27, 2018 | [Reply](#)

Thankyou somuch it is helpful



**Pavan**

January 29, 2018 | [Reply](#)

Thanks Bala.



**Ayesha**

November 29, 2017 | [Reply](#)

Thank u soo much



**Josh**

November 28, 2017 | [Reply](#)

Shilpa: do you have any advice or sample if one is working from one requirements specifications document that has both BR/FR/NFR?

Thanks



**Shilpa**

November 29, 2017 | [Reply](#)

Hi Josh, Thanks for writing us.

so you are working on one doc that has both BR and FR/NFR ? — Let me know if I have understood your question correctly.

In this case, Document name will be same, so you can add only one column for that. And BR and FR will have unique IDs. so you can add those in the given sample.

Hope this helps !

If not or any issue, please let me know. Will be

Author

more happy to help.



**Jaheer**

November 7, 2017 | [Reply](#)

Thanks for given such information , It's very helpful

...



**Alejandra Sevilla**

April 25, 2017 | [Reply](#)

Great article! It is explained very clearly and I loved the examples!



**Shilpa**

May 4, 2017 | [Reply](#)

Thank u so much ! Do let us know if you want us to cover any other topic of your interest.

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