

SOFTWARE TESTING COURSE



TODAY'S AGENDA

- What is Software?
- Software Risks
- What is Software Testing?
- Benefits of Software Testing
- Who does Testing?
- Qualifications of a tester
- What is Manual Testing?
- SDLC
- STLC

```
mirror_mod = modifier_ob.  
set mirror object to mirror.  
mirror_mod.mirror_object =  
operation == "MIRROR_X":  
mirror_mod.use_x = True  
mirror_mod.use_y = False  
mirror_mod.use_z = False  
operation == "MIRROR_Y":  
mirror_mod.use_x = False  
mirror_mod.use_y = True  
mirror_mod.use_z = False  
operation == "MIRROR_Z":  
mirror_mod.use_x = False  
mirror_mod.use_y = False  
mirror_mod.use_z = True  
  
selection at the end -add  
mirror_ob.select= 1  
modifier_ob.select=1  
context.scene.objects.active  
("Selected" + str(modifier_ob.  
mirror_ob.select = 0  
= bpy.context.selected_object  
data.objects[one.name].select  
  
print("please select exactly  
  
-- OPERATOR CLASSES --  
  
types.Operator):  
X mirror to the selected  
object.mirror_mirror_x"  
mirror X"  
  
context):  
context.active_object is not
```

WHAT IS A SOFTWARE ?

A Software is a set of programs, which is designed to perform a task. It guides the hardware what to do.

System Software:

- Helps run the computer hardware and computer system itself. System software includes operating systems, device drivers, diagnostic tools and more.
- System software is almost always pre-installed on your computer.

Application Software:

- Allows users to accomplish one or more tasks. It includes word processing, web browsing and almost any other task for which you might install software. (Some application software is pre-installed on most computer systems)

QUESTION TIME



**Drop the following
in the correct circle.**



APPLICATION
SOFTWARE

SYSTEM
SOFTWARE

**Drop the following
in the correct circle.**



**APPLICATION
SOFTWARE**



**SYSTEM
SOFTWARE**



COMPANIES

Product Based Companies:

- Develop a single product and runs the business by selling it to it's clients.
- Standard off the shelf software with common features.
- Quality is king!
- E.g. Apple & Microsoft.

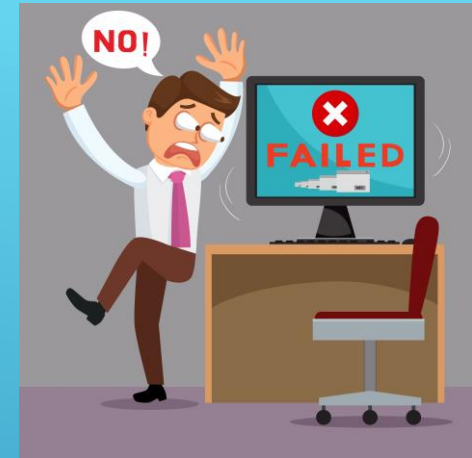
Service Based Companies:

- Gives software solutions to other companies.
- Customer is king!
- E.g. TCS, IBM

SOFTWARE RISKS

23094832	23355647	94643456	48355551	23094832	46478126	55280457	50845634
98564875	65861111	48916498	11001018	98564875	17823156	56788832	32535466
56732149	87484647	68456343	64578956	56732149	73213321	13321672	89355644
0-932476	81261782	25354668	87776886	0-932476	67223154	23154312	57577658
98345656	31115673	93556476	65478516	98345656	31221453	21453201	61111874
00874768	21332167	58647869	55844551	00874768	20113156	18831565	84647812
55647016	22315431	68866874	61494643	55647016	54345874	43577458	61743122
89355647	22145321	84610478	45648964	89355647	98645789	74986457	14532131
65864786	31500065	12617823	98684563	65864786	56877768	74457458	50006565
96880006	65434587	15673213	43253546	96880006	86065478	89568777	43458749
68748464	498			68748464	654	86421315	
78126178	156			78126178	744	65434587	
23156732	874			23156732	149	49886845	
13321672	789			13321672	364	63432535	
23154312	768			23154312	360	46689355	
21453201	78516558	47851655	15673213	21453201	53546689	84563432	64765864
13156543	44551614	84455161	32110672	13156543	35564765	53546689	78696886
45874986	94643456	49464345	64564868	45874986	86111187	35564457	68748461
45789568	48916498	64896498	57875867	45789568	48464781	57765861	04781261
77768860	68456343	68456343	88944334	77768860	26178231	11187484	78231567
65478516	25394668	25354668	21010011	65478516	11567321	64781261	32133216
55844551	93556476	93556476	56456475	55844551	33216722	78231115	72213156
06149464	58647869	58647869	61249765	06149464	31543122	67321332	54345874
34564896	68866874	68866874	91093485	34564896	14532131	16727231	98645789
49860845	84610478	84647812	39201010	49860845	50006565	54312214	56877768
63432535	12617823	61782315	10048924	63432535	43458749	53213150	86654785

SYSTEM FAILURE



Risks turn into issues these issues then usually manifest themselves into disasters & chaos to end users when they use the software in their daily business

- In April 2015, Bloomberg terminal in London crashed due to software glitch affected more than 300,000 traders on financial markets. It forced the government to postpone a 3bn pound debt sale.
- Nissan cars had to recall over 1 million cars from the market due to software failure in the airbag sensory detectors. There has been reported two accident due to this software failure.
- Starbucks was forced to close about 60 percent of stores in the U.S and Canada due to software failure in its POS system. At one point store served coffee for free as they unable to process the transaction.
- Some of the Amazon's third party retailers saw their product price is reduced to 1p due to a software glitch. They were left with heavy losses.
- In 2015 fighter plane F-35 fell victim to a software bug, making it unable to detect targets correctly.
- In 1985, Canada's Therac-25 radiation therapy machine malfunctioned due to software bug and delivered lethal radiation doses to patients, leaving 3 people dead and critically injuring 3 others.
- In April of 1999, a software bug caused the failure of a \$1.2 billion military satellite launch, the costliest accident in history
- In May of 1996, a software bug caused the bank accounts of 823 customers of a major U.S. bank to be credited with 920 million US dollars.

SOFTWARE

TESTING



WHAT IS SOFTWARE TESTING?

Testing is the process which includes the set of activities to make sure software application/product is working as per client's requirements.



Actual vs Expected



Testing is a part of the development process in SDLC.



It is an activity to detect and identify the defects in the software.



Verify and Validate the completeness of software product.



It is an activity to detect and identify the defects in the software. Before releasing to the client we check to see if we can deliver to customer.



Objective of testing is to release **quality** product to the client.

WHAT ARE THE BENEFITS OF SOFTWARE TESTING?

- **Cost-Effective:** It is one of the important advantages of software testing. Testing any IT project on time helps you to save your money for the long term. In case if the bugs caught in the earlier stage of software testing, it costs less to fix.
- **Security:** It is the most vulnerable and sensitive benefit of software testing. People are looking for trusted products. It helps in removing risks and problems earlier.
- **Best Quality Product:** It is an essential requirement of any software product because customers want a software which is bug free. Testing ensures a quality product is delivered to customers.
- **Customer Satisfaction:** The main aim of any product is to give satisfaction to their customers. Providing best **quality** product in order to get customer satisfaction.

WHO DOES TESTING?



Software Testers



Project Developers



Project Lead



Team Manager



End Users

Qualification Of Tester



Challenges Of Tester

- Relationship with Developer
- Developing Automation framework from scratch
- Update the test packs when requirements key point changes
- Time constraint: Quality vs Time limit

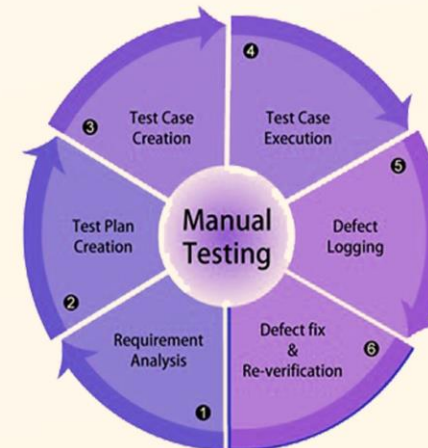


WHAT IS MANUAL TESTING?

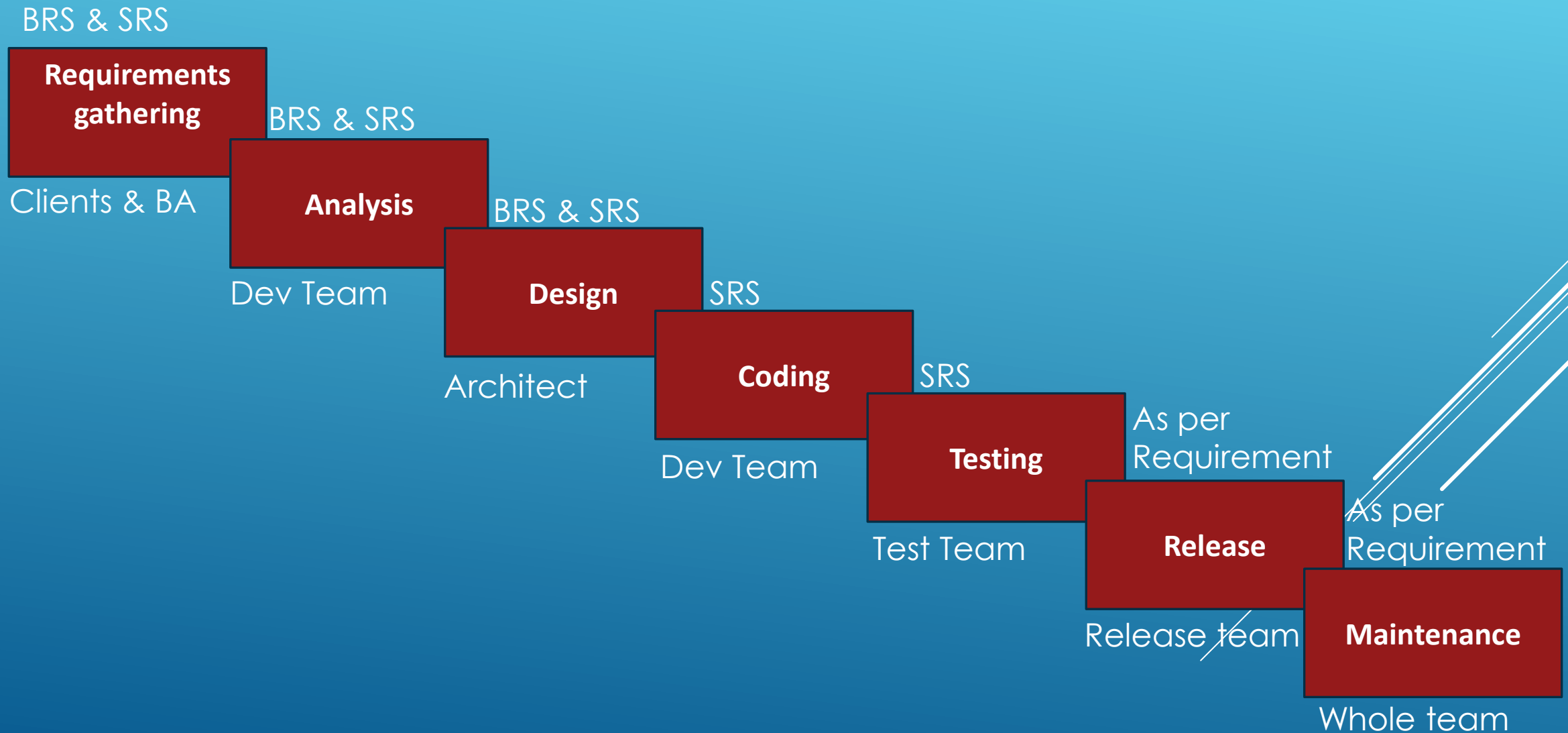
- Manual Testing is a type of Software Testing where Testers manually execute test cases without using any automation tools.
- Manual testing is the most primitive of all testing types and helps find bugs in the software system.
- Any new application must be manually tested before its testing can be automated. Manual testing requires more effort but is necessary to check automation feasibility.
- Manual Testing does not require knowledge of any testing tool.

Manual Testing

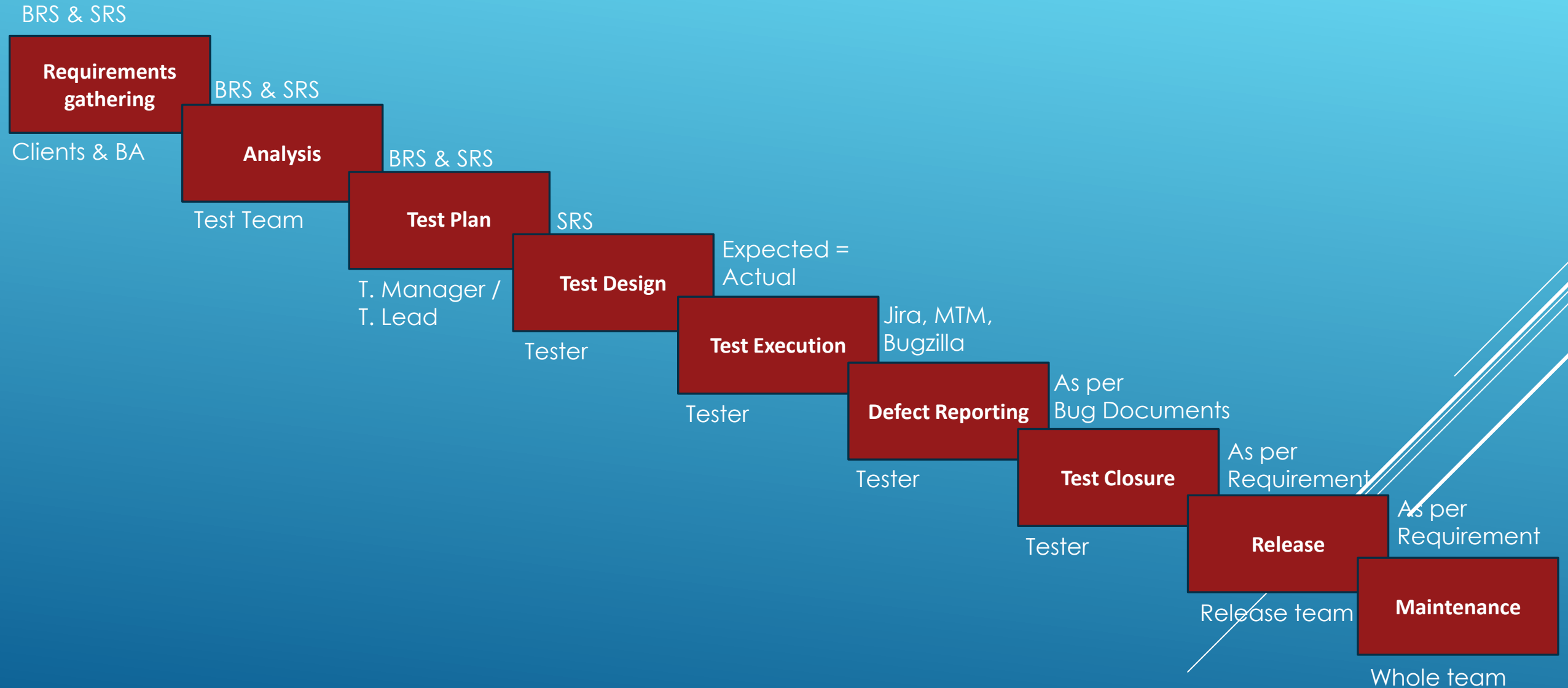
Will Never DIE



SDLC Software Development Life Cycle



STLC Software Testing Life Cycle



HOMework

- Qualifications and Challenges of a Tester?
- Importance of Testing?
- Make a list of as operating systems you can.
- Make a list of as many browsers as you can.
- Last 2 points - Email: unifytesting57@gmail.com

Deadline: Wednesday Midnight Latest

