



Core Testing>Basic Testing>Day 9

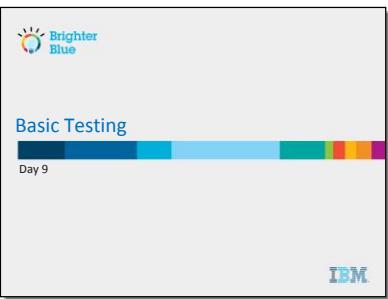
Instructor Guide

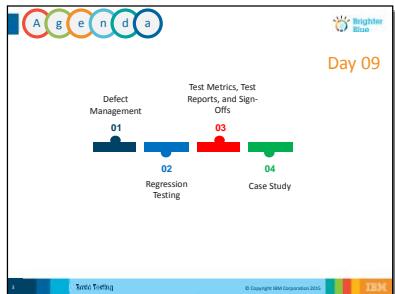


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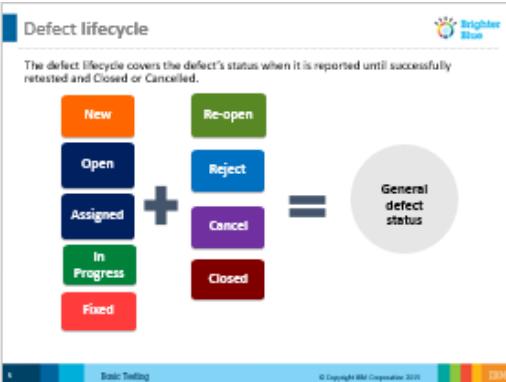
Module 01: Defect Management

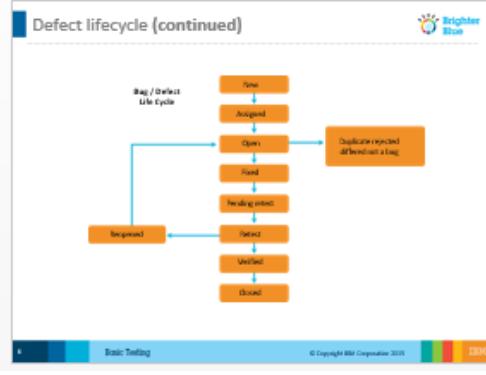
Slide Content	Instructor Guide	Use this space for your own notes
Slide 1 		

Slide Content	Instructor Guide	Use this space for your own notes
<p>Slide 2</p>  <p>At the end of the module, you should be able to:</p> <ul style="list-style-type: none"> ▪ Define defect ▪ Define and illustrate defect life cycle ▪ Describe the testing principles ▪ Define and classify defect classes ▪ List the requirement specification defects ▪ Describe the different types of design defects ▪ List the design and coding defects ▪ Illustrate defect origination and the cost of fixing defects 	<p>Purpose: To go over the objectives of this module</p> <p>Approximate Duration: 5 minutes</p> <p>What to cover:</p> <ul style="list-style-type: none"> ▪ Discuss the module objectives. 	

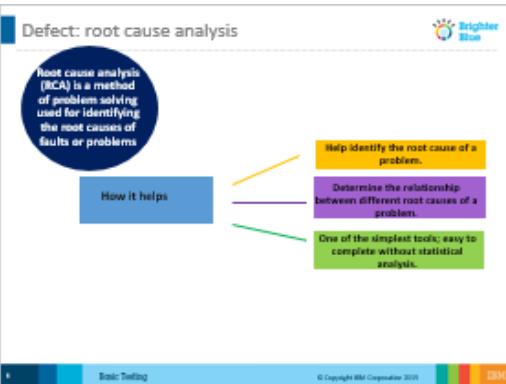
Slide Content	Instructor Guide	Use this space for your own notes
<ul style="list-style-type: none">▪ Describe how to prevent defects, the cost of errors, and the legal consequences of defective testing▪ Illustrate defect and change tracking▪ Describe how to conduct log change requests▪ Describe what are test defect metrics, defect severity, defect find and fix rate, and other defect metrics▪ Describe the common defect tracking tools▪ Illustrate the common defect or change request life cycle▪ Describe what are defect remarks and how to use a checklist before entering a defect and how to avoid duplication		

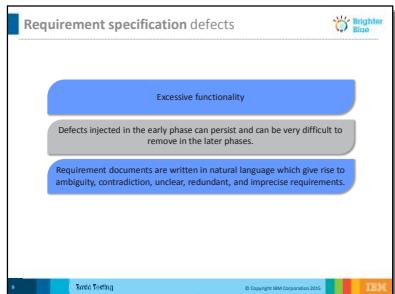
Slide Content	Instructor Guide	Use this space for your own notes
<p>Slide 3</p> <div style="border: 1px solid #ccc; padding: 10px;"> <p>What is a defect?</p> <p></p> <p>A Software Defect / Bug is a condition in a software product which does not meet a software requirement (as stated in the requirement specifications) or end-user expectations (which may not be specified but are reasonable). In other words, a defect occurs when a system fails to do what it was asked to do or program fails to perform an instruction or produces incorrect/unexpected results.</p> </div>	<p>Purpose: To define defect</p> <p>Approximate Duration: 2 mins</p> <p>What to cover:</p> <ul style="list-style-type: none"> ▪ Define defect. ▪ Highlight the basic features and points associated with a defect so that the participants can easily identify it when they chance upon it. 	

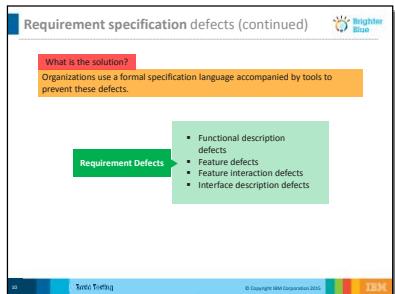
Slide Content	Instructor Guide	Use this space for your own notes
<p>Slide 4</p>  <p>The defect lifecycle covers the defect's status when it is reported until successfully retested and Closed or Cancelled.</p> <p>New Open Assigned In Progress Fixed Re-open Reject Cancel Closed</p> <p>General defect status</p> <p>Basic Testing © Copyright IBM Corporation 2008 IBM</p>	<p>Purpose: To describe defect lifecycle.</p> <p>Approximate Duration: 2 mins</p> <p>What to cover:</p> <ul style="list-style-type: none"> ▪ Inform the participants that the status of the defect is covered by the defect lifecycle until the issues are successfully retested and addressed. ▪ Tell them about what constitutes a typical defect lifecycle. 	

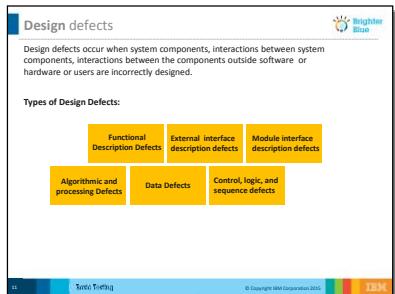
Slide Content	Instructor Guide	Use this space for your own notes
<p>Slide 5</p>  <pre> graph TD A[Assigned] --> B[Open] B --> C[Fixed] C --> D[Pending review] D --> E[Reviewed] E --> F[Closed] F --> G[Assigned] G --> B style G fill:#f0a,stroke:#f0a,color:#fff style B fill:#f0a,stroke:#f0a,color:#fff style C fill:#f0a,stroke:#f0a,color:#fff style D fill:#f0a,stroke:#f0a,color:#fff style E fill:#f0a,stroke:#f0a,color:#fff style F fill:#f0a,stroke:#f0a,color:#fff style G fill:#f0a,stroke:#f0a,color:#fff </pre>	<p>Purpose: To illustrate defect lifecycle</p> <p>Approximate Duration: 3 mins</p> <p>What to cover:</p> <ul style="list-style-type: none"> Illustrate defect lifecycle to the participants so that they have a clear idea of how the entire process works. Point out clearly the workflow of: <ul style="list-style-type: none"> Normal defect Exception defect 	

Slide Content	Instructor Guide	Use this space for your own notes
<p>Slide 6</p>  <p>The diagram illustrates the classification of defects. A central blue circle labeled "Defect classification" has four lines radiating outwards to four colored boxes: yellow for "Requirement Specification", purple for "Design", green for "Coding", and red for "Testing".</p>	<p>Purpose: To describe the defect classifications.</p> <p>Approximate Duration: 3 mins</p> <p>What to cover:</p> <ul style="list-style-type: none"> ▪ Inform the participants that there are many classifications of defects and as a general rule, a single scheme of classification should be adopted by organizations to apply to all projects. ▪ Describe how defects can be classified into four main types according to their basis of origin: <ul style="list-style-type: none"> ○ Requirement specification ○ Design ○ Coding ○ Testing 	

Slide Content	Instructor Guide	Use this space for your own notes
<p>Slide 7</p>  <p>The slide content includes a title 'Defect: root cause analysis' and a circular icon containing the text 'Root cause analysis (RCA) is a method of problem solving used for identifying the root causes of faults or problems'. Below this is a section titled 'How it helps' with three bullet points: 'Help identify the root cause of a problem.', 'Determine the relationship between different root causes of a problem.', and 'One of the simplest tools; easy to complete without statistical analysis.' The slide also features the Brighter Blue logo in the top right corner and navigation icons at the bottom.</p>	<p>Purpose: To describe the defect root cause analysis</p> <p>Approximate Duration: 5 mins</p> <p>What to cover:</p> <ul style="list-style-type: none"> ▪ Describe the defect root cause analysis ▪ Understand the ways in which defect root cause analysis process help: <ul style="list-style-type: none"> ○ Help identify the root cause of the problem ○ Determine the relationship between different root causes of a problem ○ One of the simplest tools; easy to complete without statistical analysis 	

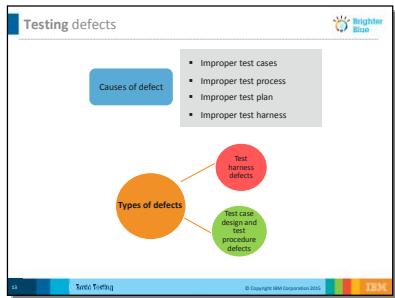
Slide Content	Instructor Guide	Use this space for your own notes
<p>Slide 8</p>  <p>The slide content is titled "Requirement specification defects". It features a blue header bar with the title and the Brighter Blue logo. Below the header, there is a large blue callout box containing the text "Excessive functionality". Underneath this, a grey box contains the text "Defects injected in the early phase can persist and can be very difficult to remove in the later phases." At the bottom of the slide, there is a footer bar with the text "Testing Testing" and the IBM logo.</p>	<p>Purpose: To describe the requirement specification defects</p> <p>Approximate Duration: 5 mins</p> <p>What to cover:</p> <ul style="list-style-type: none"> ▪ Describe the requirement specification defects that may arise like: <ul style="list-style-type: none"> ○ Excessive functionality ○ Defects in the early phase (since they often persist and can be stubborn to remove) ○ Ambiguity, contradiction, unclear, redundant, and imprecise requirements arising due to requirement documents written in natural language 	

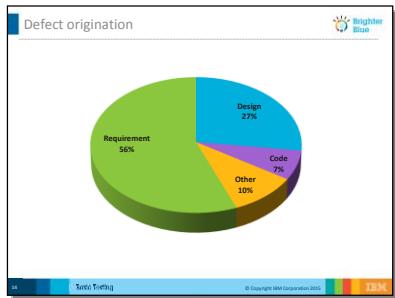
Slide Content	Instructor Guide	Use this space for your own notes
<p>Slide 9</p>  <p>The slide content includes a title 'Requirement specification defects (continued)' and a sub-section 'What is the solution?'. It states that organizations use a formal specification language accompanied by tools to prevent these defects. A green box labeled 'Requirement Defects' lists four types of defects: Functional description defects, Feature defects, Feature interaction defects, and Interface description defects. The slide footer includes 'Testing Testing' and '© Copyright IBM Corporation 2010'.</p>	<p>Purpose: To define solution and the requirement defects.</p> <p>Approximate Duration: 5 mins</p> <p>What to cover:</p> <ul style="list-style-type: none"> ▪ Give a brief overview of solution to the participants. ▪ Tell them about the common requirement defects like: <ul style="list-style-type: none"> ○ Functional description defects ○ Feature defects ○ Feature interaction defects ○ Interface description defects 	

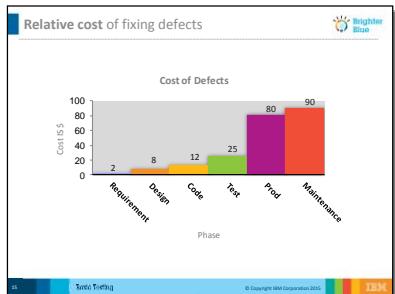
Slide Content	Instructor Guide	Use this space for your own notes
<p>Slide 10</p>  <p>The slide content includes:</p> <ul style="list-style-type: none"> Design defects: A definition of design defects. Types of Design Defects: <ul style="list-style-type: none"> Functional Description Defects External interface description defects Module interface description defects Algorithmic and processing Defects Data Defects Control, logic, and sequence defects 	<p>Purpose: To describe the types of design defects</p> <p>Approximate Duration: 3 mins</p> <p>What to cover:</p> <ul style="list-style-type: none"> Inform the participants about the circumstances in which design defects take place. Describe the types of design defects that generally occur: <ul style="list-style-type: none"> Functional description defects External internal description defects Module interface description defects Algorithmic and processing defects Data defects Control, logic, and sequence defects 	

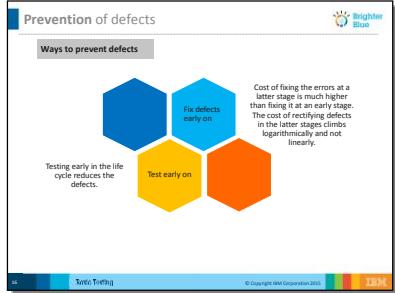
Slide Content	Instructor Guide	Use this space for your own notes
<p>Slide 11</p>  <p>Coding defects are derived from errors in implementing the code. Coding defects are similar to design defects.</p>	<p>Purpose: To list the types of coding defects</p> <p>Approximate Duration: 5 mins</p> <p>What to cover:</p> <ul style="list-style-type: none"> ▪ Inform the participants how coding defects occur. ▪ Explain the similarity between coding and design defects. ▪ List out the types of coding defects there may be, like : <ul style="list-style-type: none"> ○ External hardware, software interfaces defects ○ Algorithmic and processing defects ○ Control, Logic, and Sequence Defects ○ Typographical defects ○ Initialization Defects ○ Data Flow defects ○ Data Defects ○ Module interface defects 	

Slide Content	Instructor Guide	Use this space for your own notes
	<ul style="list-style-type: none">○ Code documentation defects	

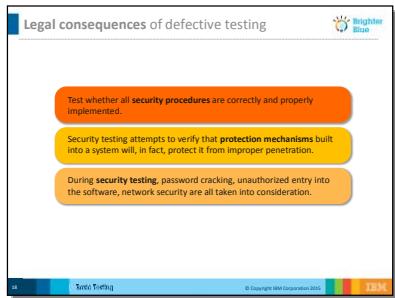
Slide Content	Instructor Guide	Use this space for your own notes
<p>Slide 12</p>  <pre> graph TD A[Causes of defect] --> B[Types of defects] B --> C[Test harness defects] B --> D[Test case design and test procedure defects] C --> E[Improper test cases] C --> F[Improper test process] C --> G[Improper test plan] C --> H[Improper test harness] </pre> <p>Defects originate due to improper Test Plan, Test Cases, Test Harness, and Test Process.</p>	<p>Purpose: To discuss the causes and types of defects</p> <p>Approximate Duration: 2 mins</p> <p>What to cover:</p> <ul style="list-style-type: none"> ▪ Inform how testing defects occur and the basic causes: <ul style="list-style-type: none"> ○ Improper Test Cases ○ Improper test process ○ Improper test plan ○ Improper test harness ▪ Discuss the types of defects: <ul style="list-style-type: none"> ○ Test harness defects ○ Test Case design and test procedure defects 	

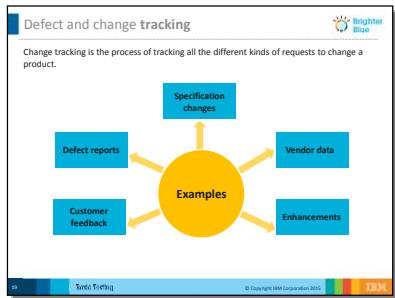
Slide Content	Instructor Guide	Use this space for your own notes
<p>Slide 13</p> 	<p>Purpose: To illustrate the process of defect origination.</p> <p>Approximate Duration: 2 mins</p> <p>What to cover:</p> <ul style="list-style-type: none"> ▪ Illustrate the process of defect origination with the help of a pie chart so that the participants can get an idea about the approximate contributory percentage of each factor for this. ▪ Clearly point out the percentages of various types of defects generally found: <ul style="list-style-type: none"> ○ Requirement- 56% ○ Design- 27% ○ Code- 7% ○ Other- 10% 	

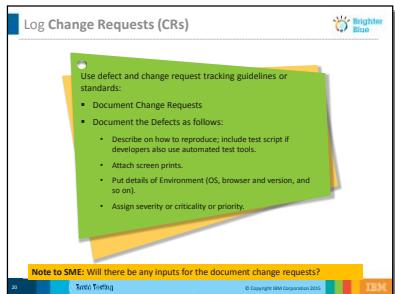
Slide Content	Instructor Guide	Use this space for your own notes														
<p>Slide 14</p>  <table border="1"> <caption>Cost of Defects</caption> <thead> <tr> <th>Phase</th> <th>Cost (\$)</th> </tr> </thead> <tbody> <tr> <td>Requirement</td> <td>2</td> </tr> <tr> <td>Design</td> <td>8</td> </tr> <tr> <td>Code</td> <td>12</td> </tr> <tr> <td>Test</td> <td>25</td> </tr> <tr> <td>Prod</td> <td>80</td> </tr> <tr> <td>Maintenance</td> <td>90</td> </tr> </tbody> </table>	Phase	Cost (\$)	Requirement	2	Design	8	Code	12	Test	25	Prod	80	Maintenance	90	<p>Purpose: To illustrate the relative cost of fixing defects.</p> <p>Approximate Duration: 2 mins</p> <p>What to cover:</p> <ul style="list-style-type: none"> ▪ Illustrate the relative cost of fixing defects on the basis of some basic factors 	
Phase	Cost (\$)															
Requirement	2															
Design	8															
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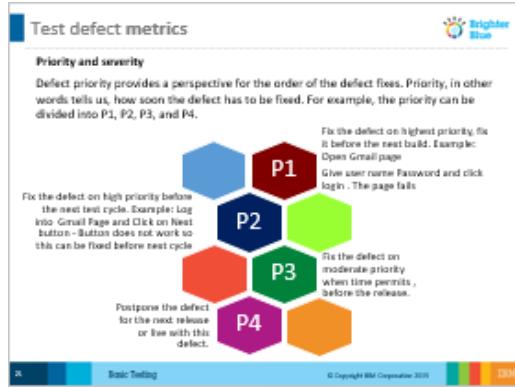
Slide Content	Instructor Guide	Use this space for your own notes
<p>Slide 15</p>  <p>The slide is titled 'Prevention of defects' and features a sub-section 'Ways to prevent defects'. It contains three hexagonal icons: a blue one labeled 'Fix defects early on', a yellow one labeled 'Test early on', and an orange one. Below these icons is a note: 'Testing early in the life cycle reduces the defects.' To the right of the icons is a text box stating: 'Cost of fixing the errors at a latter stage is much higher than fixing it at an early stage. This is because the cost of error in the latter stages climbs logarithmically and not linearly.' At the bottom left is the 'Testing' tab from the navigation bar, and at the bottom right is the 'IBM' logo.</p>	<p>Purpose: To describe the ways of preventing defects.</p> <p>Approximate Duration: 2 mins</p> <p>What to cover:</p> <ul style="list-style-type: none"> ▪ Describe the ways of preventing defects: <ul style="list-style-type: none"> ○ Fix defects early on ○ Test early on ▪ Discuss how they can help in the entire process. 	

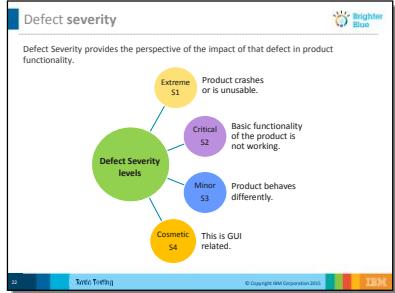
Slide Content	Instructor Guide	Use this space for your own notes
<p>Slide 16</p> 	<p>Purpose: To describe the calamities that can happen as a result of errors in testing through examples.</p> <p>Approximate Duration: 2 mins</p> <p>What to cover:</p> <ul style="list-style-type: none"> ▪ Describe the calamities that can happen as a result of errors in testing through real examples and incidents. ▪ Highlight the incidents to focus on the importance of precision. 	

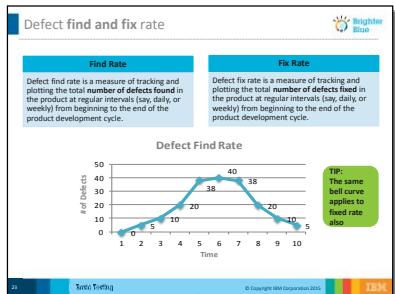
Slide Content	Instructor Guide	Use this space for your own notes
<p>Slide 17</p> 	<p>Purpose: To describe the legal consequences of defective testing.</p> <p>Approximate Duration: 2 mins</p> <p>What to cover:</p> <ul style="list-style-type: none"> ▪ Describe the various factors surrounding the legal consequences of defective testing: <ul style="list-style-type: none"> ○ Test for correct and proper implementation of all security procedures ○ Verify the proper and impenetrable factor of protection mechanisms built into a system ○ Ensure that all kinds of network penetration issues are taken into consideration during security testing 	

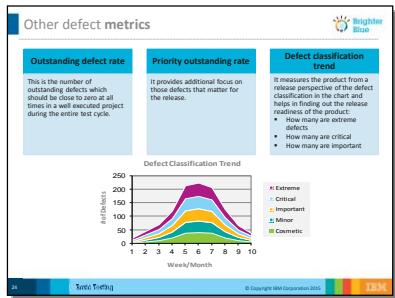
Slide Content	Instructor Guide	Use this space for your own notes
<p>Slide 18</p> 	<p>Purpose: To give an idea about defect and change tracking.</p> <p>Approximate Duration: 2 mins</p> <p>What to cover:</p> <ul style="list-style-type: none"> ▪ Give a brief idea to the participants about change tracking. ▪ Elaborate on the idea through some examples like: <ul style="list-style-type: none"> ○ Defect reports ○ Specification changes ○ Vendor data ○ Enhancements ○ Customer feedback 	

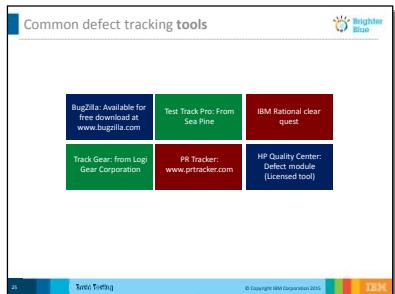
Slide Content	Instructor Guide	Use this space for your own notes
<p>Slide 19</p> 	<p>Purpose: To describe the log change requests in the documentation process.</p> <p>Approximate Duration: 2 mins</p> <p>What to cover:</p> <ul style="list-style-type: none"> ▪ Describe the log change requests in the documentation process. ▪ Discuss the standards or guidelines for defect and change request tracking: <ul style="list-style-type: none"> ○ Document change requests ○ Documenting defects 	

Slide Content	Instructor Guide	Use this space for your own notes
<p>Slide 20</p> <div data-bbox="255 442 770 829"> <p>Test defect metrics</p> <p>Priority and severity</p> <p>Defect priority provides a perspective for the order of the defect fixes. Priority, in other words tells us, how soon the defect has to be fixed. For example, the priority can be divided into P1, P2, P3, and P4.</p>  </div>	<p>Purpose: To describe the test defect metrics in detail.</p> <p>Approximate Duration: 2 mins</p> <p>What to cover:</p> <ul style="list-style-type: none"> ▪ Describe what is defect priority and severity. ▪ Describe how the priority can be divided into various levels like: <ul style="list-style-type: none"> ○ P1 ○ P2 ○ P3 ○ P4 ▪ Discuss the steps that need to be taken according to the levels of priority. 	

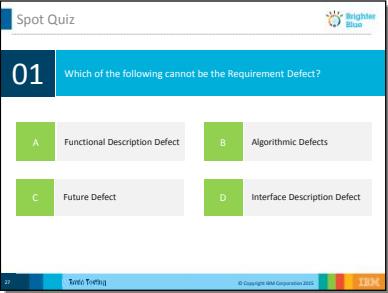
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<p>Slide 21</p> 	<p>Purpose: To describe in detail the types of defect severity.</p> <p>Approximate Duration: 2 mins</p> <p>What to cover:</p> <ul style="list-style-type: none"> ▪ Describe the types of defect severity. ▪ Give the participants an idea about the defect severity levels: <ul style="list-style-type: none"> ○ Extreme S1 ○ Critical S2 ○ Minor S3 ○ Cosmetic S4 	

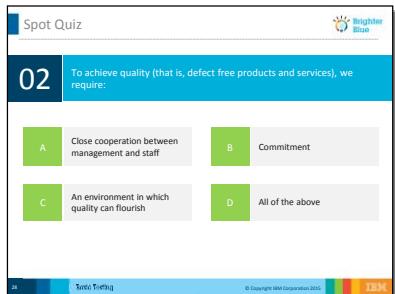
Slide Content	Instructor Guide	Use this space for your own notes
<p>Slide 22</p>  <p>The slide content includes two boxes: 'Find Rate' and 'Fix Rate'. Both boxes define defect rates as measures of tracking and plotting defects at regular intervals. The 'Find Rate' box specifies intervals from 'say, daily, or weekly' to 'the end of the product development cycle'. The 'Fix Rate' box specifies intervals from 'say, daily, or weekly' to 'the end of the product development cycle'. Below these definitions is a graph titled 'Defect Find Rate' showing the number of defects over time. The graph has 'Time' on the x-axis (1 to 10) and 'No Defects' on the y-axis (0 to 50). The curve starts at (1, 5), rises to (5, 38), peaks at (6, 40), dips to (7, 38), and then drops sharply to (10, 5). A green callout box labeled 'TIP: The same bell curve applies to fixed rate also.' points to the peak of the curve.</p>	<p>Purpose: To describe the defect fix and find rates.</p> <p>Approximate Duration: 3 mins</p> <p>What to cover:</p> <ul style="list-style-type: none"> ▪ Describe the defect fixes and find rates. ▪ Discuss how to measure them with the participants. ▪ Illustrate defect find rate through a graph. 	

Slide Content	Instructor Guide	Use this space for your own notes																																																																		
<p>Slide 23</p>  <p>The slide content includes:</p> <ul style="list-style-type: none"> Outstanding defect rate: This is the number of outstanding defects which should be close to zero at all times during the test cycle. Priority outstanding rate: It provides additional focus on those defects that matter for the release. Defect classification: It measures the product from a release perspective of the defect classification trend and helps in finding out the release readiness of the product. <ul style="list-style-type: none"> How many are critical defects How many are critical How many are important <p>Defect Classification Trend</p> <table border="1"> <thead> <tr> <th>Week/Month</th> <th>Extreme</th> <th>Critical</th> <th>Important</th> <th>Major</th> <th>Cosmetic</th> </tr> </thead> <tbody> <tr><td>1</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>2</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>3</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>4</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>5</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>6</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>7</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>8</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>9</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>10</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> </tbody> </table> <p>Tutor Testing © Copyright IBM Corporation 2010 IBM</p>	Week/Month	Extreme	Critical	Important	Major	Cosmetic	1	0	0	0	0	0	2	0	0	0	0	0	3	0	0	0	0	0	4	0	0	0	0	0	5	0	0	0	0	0	6	0	0	0	0	0	7	0	0	0	0	0	8	0	0	0	0	0	9	0	0	0	0	0	10	0	0	0	0	0	<p>Purpose: To describe the other defect metrics.</p> <p>Approximate Duration: 2 mins</p> <p>What to cover:</p> <ul style="list-style-type: none"> Describe the other defect metrics that include- <ul style="list-style-type: none"> Outstanding defect rate Priority outstanding rate Defect classification trend Illustrate defect classification trend through a graphical representation. 	
Week/Month	Extreme	Critical	Important	Major	Cosmetic																																																															
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Slide Content	Instructor Guide	Use this space for your own notes
<p>Slide 24</p> 	<p>Purpose: To describe the common defect tracking tools</p> <p>Approximate Duration: 2 mins</p> <p>What to cover:</p> <ul style="list-style-type: none"> ▪ List the common defect tracking tools: <ul style="list-style-type: none"> ○ BugZilla ○ Test Track Pro ○ IBM Rational clear quest ○ Track Gear ○ PR Tracker ○ HP Quality Center ▪ Give the participants an idea about their availability. 	

Slide Content	Instructor Guide	Use this space for your own notes
<p>Slide 25</p> 	<p>Approximate Duration: 2 mins</p> <p>What to cover:</p> <ul style="list-style-type: none"> ▪ Ask the participants if they have any questions. ▪ Include any questions that will be addressed later in the course as parking lot items. ▪ Use this activity to recap the key takeaways from this module. 	

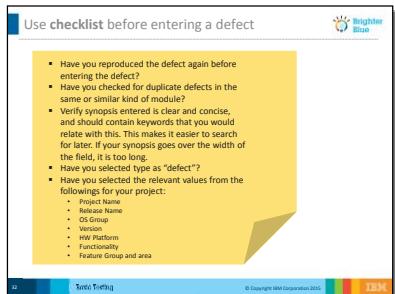
Slide Content	Instructor Guide	Use this space for your own notes
<p>Slide 26</p> 	<p>Purpose: To check knowledge of the participants and break the monotony</p> <p>Approximate Duration: 2 mins</p> <p>What to cover:</p> <ul style="list-style-type: none"> ▪ Ask the participants the question on the slide. Treat the question as a poll. Ask them to raise their hands based on their answer. ▪ The correct answer is B. Algorithmic Defects 	

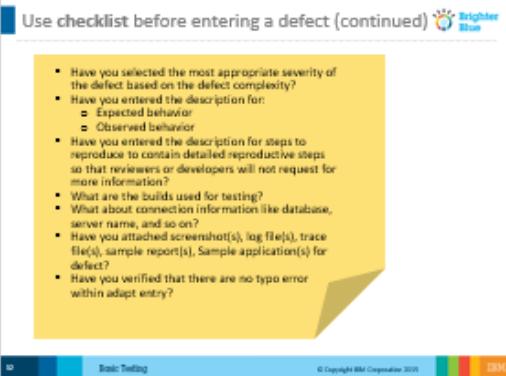
Slide Content	Instructor Guide	Use this space for your own notes
<p>Slide 27</p>  <p>The slide displays a question from a 'Spot Quiz' titled '02'. The question asks: 'To achieve quality (that is, defect free products and services), we require:'. Below the question are four options: A (Close cooperation between management and staff), B (Commitment), C (An environment in which quality can flourish), and D (All of the above). At the bottom of the slide, there is a footer with the text 'Topic Testing' and '© Copyright IBM Corporation 2010 IBM'.</p>	<p>Purpose: To check knowledge of the participants and break the monotony.</p> <p>Approximate Duration: 2 mins</p> <p>What to cover:</p> <ul style="list-style-type: none"> ▪ Ask the participants the question on the slide. Treat the question as a poll - Ask them to raise their hands based on their answer. ▪ The correct answer is D. All of the above. 	

Slide Content	Instructor Guide	Use this space for your own notes
<p>Slide 28</p>  <p>03 Defect is any variance between actual and _____ results.</p> <p>A Expected B True</p> <p>C Perfect D Wrong</p>	<p>Purpose: To check knowledge of the participants and break the monotony.</p> <p>Approximate Duration: 2 mins</p> <p>What to cover:</p> <ul style="list-style-type: none"> ▪ Ask the participants the question on the slide. Treat the question as a poll. Ask them to raise their hands based on their answer. ▪ The correct answer is A. Expected 	

Slide Content	Instructor Guide	Use this space for your own notes
<p>Slide 29</p>  <ul style="list-style-type: none"> ▪ Condense: Say it clearly but briefly. ▪ Accurate: Is it a defect or could it be user error, misunderstanding, and so on? ▪ Neutralize: Just the facts. No zingers. No humor. No emotion. ▪ Precise: Explicitly, what is the problem? ▪ Isolate: What has been done to isolate the problem? ▪ Re-create: What are the essentials in triggering/re-creating this problem? (environment, steps, conditions) ▪ Impact: What is the impact to the customer? What is the impact to testing? Sell the defect. 	<p>Purpose: To discuss the key points required to make a defect report effective</p> <p>Approximate Duration: 2 mins</p> <p>What to cover:</p> <ul style="list-style-type: none"> ▪ Explain to the participants what are the key points required to make a defect report effective: <ul style="list-style-type: none"> ○ Condense ○ Accurate ○ Neutralize ○ Precise ○ Isolate ○ Re-create ○ Impact ○ Debug ○ Evidence ▪ Discuss in detail all the nine points so that the participants are able to craft an effective defect report in no time. 	

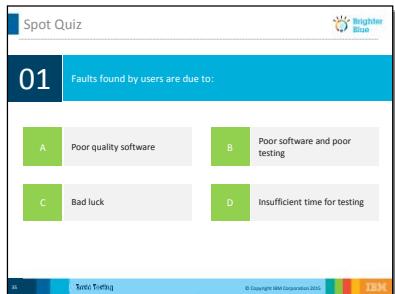
Slide Content	Instructor Guide	Use this space for your own notes
<ul style="list-style-type: none">▪ Debug: What does development need to make it easier to debug? (Traces, dumps, logs, immediate access, and so on.)▪ Evidence: What documentation will prove the existence of the error?		

Slide Content	Instructor Guide	Use this space for your own notes
<p>Slide 30</p>  <p>The screenshot shows a slide with the title "Use checklist before entering a defect". Below the title is a yellow sticky note containing a bulleted checklist:</p> <ul style="list-style-type: none"> Have you reproduced the defect again before entering the defect? Have you checked for duplicate defects in the same or similar kind of module? Verify synopsis entered is clear and concise and describes the defect clearly so others could relate with this. This makes it easier to search for later. If your synopsis goes over the width of the field, it is too long. Have you selected type as "defect"? Have you selected the relevant values from the following fields in your project: <ul style="list-style-type: none"> Project Name Release Name Code Group Version HW Platform Functionality Feature Group and area <p>At the bottom of the slide, there are navigation buttons for "First", "Previous", "Next", "Last", and "Print", along with the text "Copyright IBM Corporation 2010" and the IBM logo.</p>	<p>Purpose: To tell the participants about the checklist before entering a defect</p> <p>Approximate Duration: 3 mins</p> <p>What to cover:</p> <ul style="list-style-type: none"> Discuss the various factors to be kept in mind before entering a defect through a checklist 	

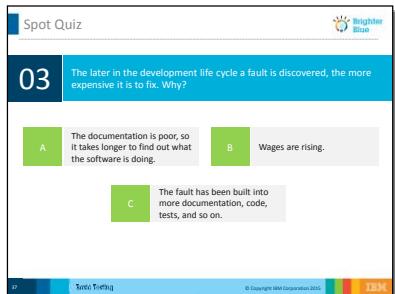
Slide Content	Instructor Guide	Use this space for your own notes
<p>Slide 31</p>  <p>The slide content includes a checklist:</p> <ul style="list-style-type: none"> ▪ Have you selected the most appropriate severity of the defect based on the defect complexity? ▪ Have you entered the description for: <ul style="list-style-type: none"> ▫ Expected behavior ▫ Observed behavior ▪ Have you entered the description for steps to reproduce to contain detailed reproductive steps so that reviewers or developers will not request for more information? ▪ What are the builds used for testing? ▪ What about connection information like database, server name, and so on? ▪ Have you attached screenshot(s), log file(s), trace file(s), sample report(s), Sample application(s) for defect? ▪ Have you verified that there are no typo error within adapt entry? 	<p>Purpose: To tell the participants about the checklist before entering a defect</p> <p>Approximate Duration: 3 mins</p> <p>What to cover:</p> <ul style="list-style-type: none"> ▪ Take forward the discussion started in the previous slides by focusing on other factors to be kept in mind before entering a defect through a checklist. 	

Slide Content	Instructor Guide	Use this space for your own notes
<p>Slide 32</p>  <p>The slide content includes:</p> <ul style="list-style-type: none"> Avoiding duplication Duplication of bugs is a major hurdle for the testing community which results in the wastage of: <ul style="list-style-type: none"> Effort Time and Money This is because more than one resource may report the same defect or the same resource may raise the same defect more than once. This not only results in wastage of time among the testers, but also the developers. The goal is to provide a methodology on how to minimize the duplication of bugs / defects which are reported in the software world, thereby saving time and money to the organization. 	<p>Purpose: To describe how to avoid duplication of bugs</p> <p>Approximate Duration: 5 mins</p> <p>What to cover:</p> <ul style="list-style-type: none"> Name the main factors which suffer due to duplication of bugs: <ul style="list-style-type: none"> Effort Time money Describe the reasons behind this debacle happening in the first place. Discuss how a methodology is needed for minimizing of defects or bugs reported in the software word. 	

Slide Content	Instructor Guide	Use this space for your own notes
<p>Slide 33</p> 	<p>Approximate Duration: 2 mins</p> <p>What to cover:</p> <ul style="list-style-type: none"> ▪ Ask the participants if they have any questions. ▪ Include any questions that will be addressed later in the course as parking lot items. ▪ Use this activity to recap the key takeaways from this module. 	

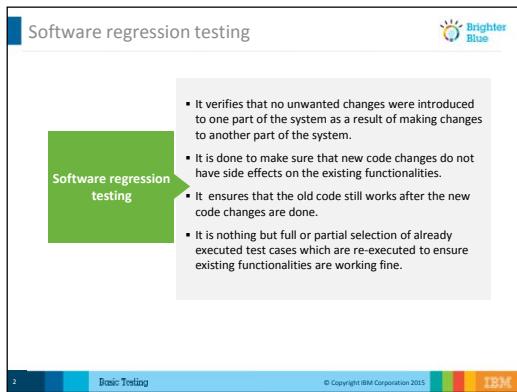
Slide Content	Instructor Guide	Use this space for your own notes
<p>Slide 34</p>  <p>The slide displays a poll titled "Spot Quiz" with the question "Faults found by users are due to:". It lists four options: A. Poor quality software, B. Poor software and poor testing, C. Bad luck, and D. Insufficient time for testing. The correct answer, B, is highlighted in green.</p>	<p>Purpose: To check knowledge of the participants and break the monotony</p> <p>Approximate Duration: 2 mins</p> <p>What to cover:</p> <ul style="list-style-type: none"> ▪ Ask the participants the question on the slide. Treat the question as a poll - Ask them to raise their hands based on their answer. ▪ The correct answer is B. Poor software and poor testing. 	

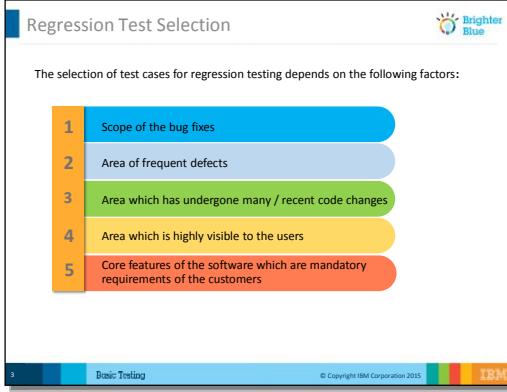
Slide Content	Instructor Guide	Use this space for your own notes
<p>Slide 35</p> 	<p>Purpose: To check knowledge of the participants and break the monotony</p> <p>Approximate Duration: 2 mins</p> <p>What to cover:</p> <ul style="list-style-type: none"> ▪ Ask the participants the question on the slide. Treat the question as a poll. Ask them to raise their hands based on their answer. ▪ The correct answer is C. A defect. 	

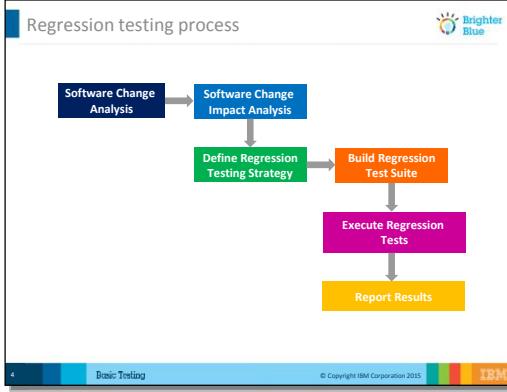
Slide Content	Instructor Guide	Use this space for your own notes
<p>Slide 36</p>  <p>The later in the development life cycle a fault is discovered, the more expensive it is to fix. Why?</p> <p>A The documentation is poor, so it takes longer to find out what the software is doing. B Wages are rising. C The fault has been built into more documentation, code, tests, and so on.</p>	<p>Purpose: To check knowledge of the participants and break the monotony</p> <p>Approximate Duration: 2 mins</p> <p>What to cover:</p> <ul style="list-style-type: none"> ▪ Ask the participants the question on the slide. Treat the question as a poll - Ask them to raise their hands based on their answer. ▪ The correct answer is C. The fault has been built into more documentation, code, tests, and so on. 	

Module 02: Regression Testing

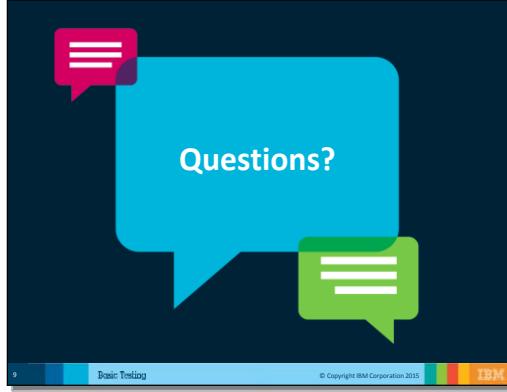
Slide Content	Instructor Guide	Use this space for your own notes
<p>Slide 37</p>  <p>The objectives of this module are to:</p> <ul style="list-style-type: none"> ▪ Define and describe the importance and pre-requisites of Test Case writing ▪ Describe the characteristics of a good Test Case and how to write it • List the attributes of Test Case and the documents required to write a Test Case 	<p>Purpose: To go over the objectives of this module</p> <p>Approximate Duration: 2 mins</p> <p>What to cover:</p> <ul style="list-style-type: none"> • Give an overview of the topic covered in the module. • Enlighten the participants about the relevance of software regression testing in recent times and their careers. 	

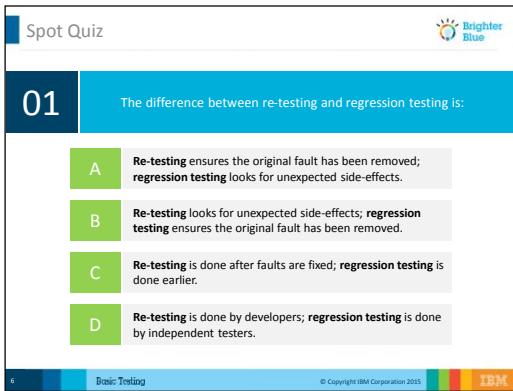
Slide Content	Instructor Guide	Use this space for your own notes
<p>Slide 38</p>  <p>Purpose: To describe the features of software regression testing</p> <p>Approximate Duration: 3 mins</p> <p>What to cover:</p> <ul style="list-style-type: none"> • Introduce the participants to software regression testing. • Explain what software regression is testing. • Ask participants why they think software regression testing might be required. Build upon their responses to tell them why it is required. • Share examples of cases where regression testing was used. 		

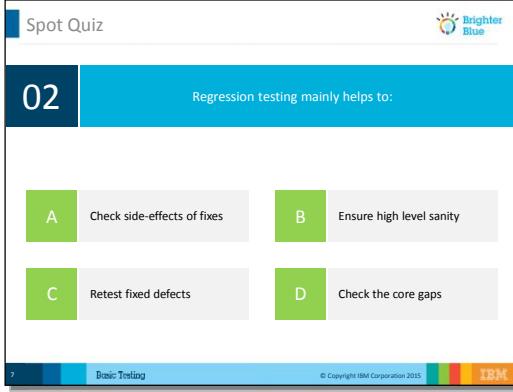
Slide Content	Instructor Guide	Use this space for your own notes
<p>Slide 39</p>  <p>The selection of test cases for regression testing depends on the following factors:</p> <ul style="list-style-type: none"> 1 Scope of the bug fixes 2 Area of frequent defects 3 Area which has undergone many / recent code changes 4 Area which is highly visible to the users 5 Core features of the software which are mandatory requirements of the customers <p>Basic Testing © Copyright IBM Corporation 2015 IBM</p>	<p>Purpose: To describe the factors that contribute towards the test case selection process for regression testing</p> <p>Approximate Duration: 3 mins</p> <p>What to cover:</p> <ul style="list-style-type: none"> • Share the factors that need to be considered before selecting test cases for regression testing. • It would be great if you can share examples for each factor. 	

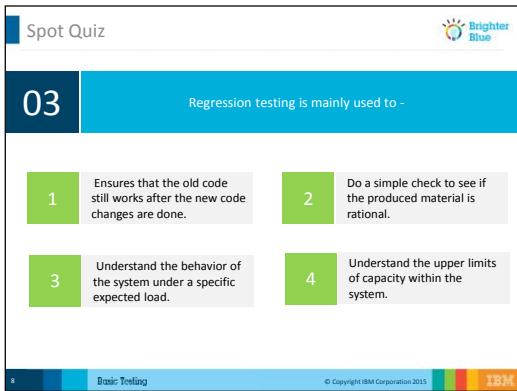
Slide Content	Instructor Guide	Use this space for your own notes
<p>Slide 40</p>  <pre> graph TD A[Software Change Analysis] --> B[Software Change Impact Analysis] B --> C[Define Regression Testing Strategy] C --> D[Build Regression Test Suite] D --> E[Execute Regression Tests] E --> F[Report Results] </pre> <p>The flowchart illustrates the regression testing process. It starts with 'Software Change Analysis' (blue box), followed by 'Software Change Impact Analysis' (blue box). This leads to 'Define Regression Testing Strategy' (green box), then 'Build Regression Test Suite' (orange box). The process continues with 'Execute Regression Tests' (purple box) and concludes with 'Report Results' (yellow box). Arrows indicate the sequential flow between each step.</p>	<p>Purpose: To illustrate the regression testing process</p> <p>Approximate Duration: 5 mins</p> <p>What to cover:</p> <ul style="list-style-type: none"> Describe each step in the regression testing process. After explaining each step, ask the participants if they have any questions before moving on to the next step. It would be great if you can use an example to illustrate the steps. 	

Slide Content	Instructor Guide	Use this space for your own notes		
<p>Slide 41</p> <div style="border: 1px solid #ccc; padding: 10px;"> <p>Problems and challenges in software regression testing</p> <p></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 5px; vertical-align: top;"> Major regression testing problems <ul style="list-style-type: none"> ▪ How to use a systematic method or tool to identify changed software parts ▪ How to use a systematic method or tool to identify software change impacts ▪ How to use a systematic method or tool to identify affected software test cases ▪ How to reduce the re-test suites ▪ How to select the test cases in a test suite </td> <td style="padding: 5px; vertical-align: top;"> Major challenge in software regression testing <p>How to minimize re-testing efforts and achieve the adequate testing coverage?</p> </td> </tr> </table> <p style="text-align: right;">© Copyright IBM Corporation 2015 </p> </div>	Major regression testing problems <ul style="list-style-type: none"> ▪ How to use a systematic method or tool to identify changed software parts ▪ How to use a systematic method or tool to identify software change impacts ▪ How to use a systematic method or tool to identify affected software test cases ▪ How to reduce the re-test suites ▪ How to select the test cases in a test suite 	Major challenge in software regression testing <p>How to minimize re-testing efforts and achieve the adequate testing coverage?</p>	<p>Purpose: To describe the problems and challenges in software regression testing</p> <p>Approximate Duration: 3 mins</p> <p>What to cover:</p> <ul style="list-style-type: none"> ▪ Describe the problems and challenges associated with software regression testing. ▪ Tell the participants why these challenges need to be solved for a smooth testing process. 	
Major regression testing problems <ul style="list-style-type: none"> ▪ How to use a systematic method or tool to identify changed software parts ▪ How to use a systematic method or tool to identify software change impacts ▪ How to use a systematic method or tool to identify affected software test cases ▪ How to reduce the re-test suites ▪ How to select the test cases in a test suite 	Major challenge in software regression testing <p>How to minimize re-testing efforts and achieve the adequate testing coverage?</p>			

Slide Content	Instructor Guide	Use this space for your own notes
<p>Slide 42</p> 	<p>Approximate Duration: 5 mins</p> <p>What to cover:</p> <ul style="list-style-type: none"> ▪ Ask the participants if they have any questions. ▪ Include any questions that will be addressed later in the course as parking lot items. ▪ Use this activity to recap the key takeaways from this module. 	

Slide Content	Instructor Guide	Use this space for your own notes
<p>Slide 43</p>  <p>The difference between re-testing and regression testing is:</p> <ul style="list-style-type: none"> A Re-testing ensures the original fault has been removed; regression testing looks for unexpected side-effects. B Re-testing looks for unexpected side-effects; regression testing ensures the original fault has been removed. C Re-testing is done after faults are fixed; regression testing is done earlier. D Re-testing is done by developers; regression testing is done by independent testers. <p>Basic Testing © Copyright IBM Corporation 2015 IBM</p>	<p>Purpose: To check the knowledge of participants and break the monotony</p> <p>Approximate Duration: 2 mins</p> <p>What to cover:</p> <ul style="list-style-type: none"> Ask the participants the question on the slide. Treat the question as a poll - Ask them to raise their hands based on their answer. The correct answer is A. Re-testing ensures the original fault has been removed; regression testing looks for unexpected side-effects. Explain the correct answer, why it's correct and others are incorrect. 	

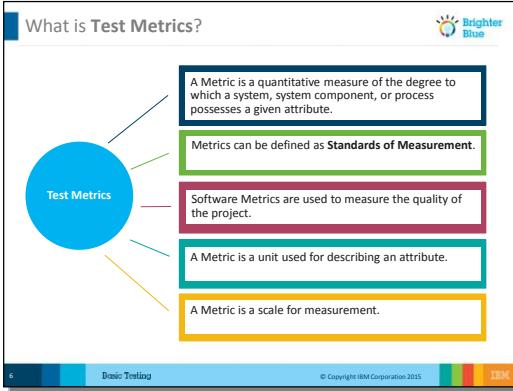
Slide Content	Instructor Guide	Use this space for your own notes
<p>Slide 44</p>  <p>The slide content shows a 'Spot Quiz' section with the question 'Regression testing mainly helps to:' followed by four options: A (Check side-effects of fixes), B (Ensure high level sanity), C (Retest fixed defects), and D (Check the core gaps). The slide footer includes the 'Basic Testing' logo and copyright information.</p>	<p>Purpose: To check the knowledge of participants and break the monotony</p> <p>Approximate Duration: 2 mins</p> <p>What to cover:</p> <ul style="list-style-type: none"> ▪ Ask the participants the question on the slide. Treat the question as a poll - Ask them to raise their hands based on their answer. ▪ The correct answer is 	

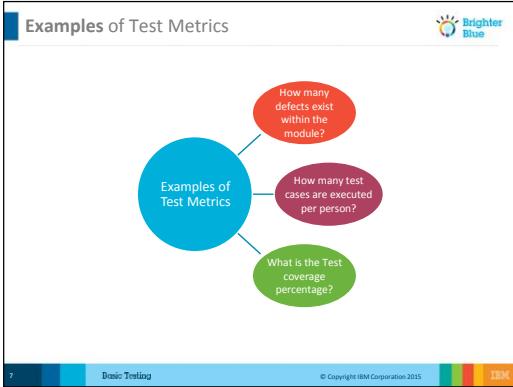
Slide Content	Instructor Guide	Use this space for your own notes
<p>Slide 45</p>  <p>03 Regression testing is mainly used to -</p> <ul style="list-style-type: none"> 1 Ensures that the old code still works after the new code changes are done. 2 Do a simple check to see if the produced material is rational. 3 Understand the behavior of the system under a specific expected load. 4 Understand the upper limits of capacity within the system. <p>Basic Testing © Copyright IBM Corporation 2015 IBM</p>	<p>Purpose: To check the knowledge of participants and break the monotony</p> <p>Approximate Duration: 2 mins</p> <p>What to cover:</p> <ul style="list-style-type: none"> Ask the participants the question on the slide. Treat the question as a poll - Ask them to raise their hands based on their answer. The correct answer is A. True 	

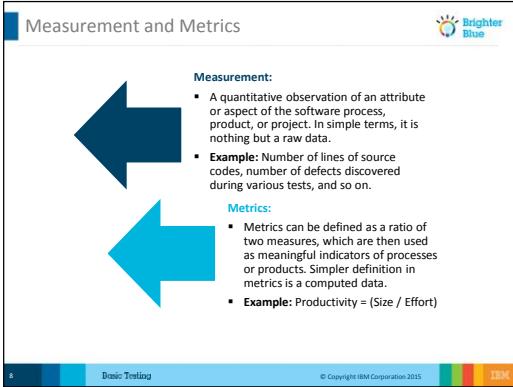
Module 03: Test Metrics, Test Reports, and Sign-off

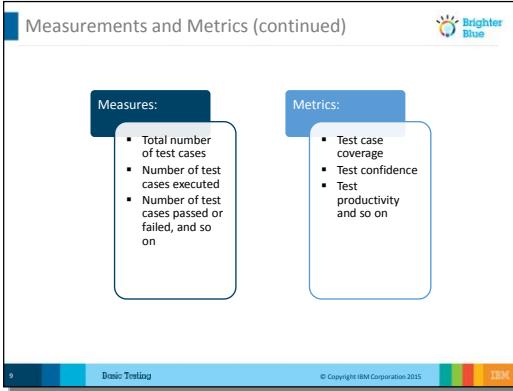
Slide Content	Instructor Guide	Use this space for your own notes
<p>Slide 46</p>  <p>At the end of this module, you should be able to:</p> <ul style="list-style-type: none"> ▪ Define Test Metrics ▪ Recall The Difference Between Measurements And Metrics ▪ Identify The Significance Of Software Testing Metrics ▪ List The Benefits Of Metrics ▪ Explain The Metrics Life Cycle 	<p>Purpose: To cover the objectives of this module</p> <p>Approximate Duration: 2 mins</p> <p>What to cover:</p> <ul style="list-style-type: none"> ▪ Introduce the participants to Test Metrics. ▪ Explain the difference between Measurements and Metrics. ▪ Describe the significance of Software Testing Metrics. ▪ List the benefits of metrics. ▪ Describe what Metrics Life Cycle is. ▪ Recall the types of test reports, such as Test Execution and Test Summary Report. ▪ Explain what Sign-offs are. 	

Slide Content	Instructor Guide	Use this space for your own notes
<ul style="list-style-type: none">▪ Recognize The Types Of Test Reports, Such As Test Execution And Test Summary Report▪ Describe Sign-offs		

Slide Content	Instructor Guide	Use this space for your own notes
<p>Slide 47</p> 	<p>Purpose: To define Test Metrics</p> <p>Approximate Duration: 5 mins</p> <p>What to cover:</p> <ul style="list-style-type: none"> ▪ Introduce the participants to test metrics. ▪ You can talk about the following: <ul style="list-style-type: none"> ○ A Metric is a quantitative measure of the degree to which a system, system component, or process possesses a given attribute. ○ A Metric can be defined as Standards of Measurement. 	

Slide Content	Instructor Guide	Use this space for your own notes
<p>Slide 48</p> 	<p>Purpose: To give examples of test metrics</p> <p>Approximate Duration: 3 - 4 mins</p> <p>What to cover:</p> <ul style="list-style-type: none"> ▪ Share examples of test metrics. ▪ You can talk about the following: 	

Slide Content	Instructor Guide	Use this space for your own notes
<p>Slide 49</p> 	<p>Purpose: To give a comparison of measurements and metrics</p> <p>Approximate Duration: 5 - 6 mins</p> <p>What to cover:</p> <ul style="list-style-type: none"> ▪ Define measurement. You can give examples. ▪ Define metrics and share examples. ▪ Ask the participants if they have any questions. 	

Slide Content	Instructor Guide	Use this space for your own notes
<p>Slide 50</p> 	<p>Purpose: To give a comparison between measurements and metrics</p> <p>Approximate Duration: 7 mins</p> <p>What to cover:</p> <ul style="list-style-type: none"> ▪ Make a comparison between measurements and metrics. ▪ Give examples. 	

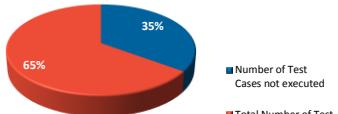
Slide Content	Instructor Guide	Use this space for your own notes
<p>Slide 51</p> <div data-bbox="202 421 720 816"> <p>Significance of Software Testing Metrics (1 of 3) </p> <p>Test Metrics is important for measuring the quality of software. Suppose, a project does not have any metrics. Then, how is the quality of work done by a Test Analyst measured?</p> <ul style="list-style-type: none"> A Test Analyst has to: <p>10 Basic Testing © Copyright IBM Corporation 2015</p> </div> <p>In the above scenario, if metrics are not followed, then the work completed by the test analyst will be subjective. For example, the test report will not have the proper information to know the status of his work or project.</p>	<p>Purpose: To understand the significance of Software Testing Metrics</p> <p>Approximate Duration: 3 - 4 mins</p> <p>What to cover:</p> <ul style="list-style-type: none"> Explain to the class why test metrics is important. Share an example. Discuss the role of a test analyst. Refer to the notes section of the slide (also in the Slide Content Column of this document) to explain it further. 	

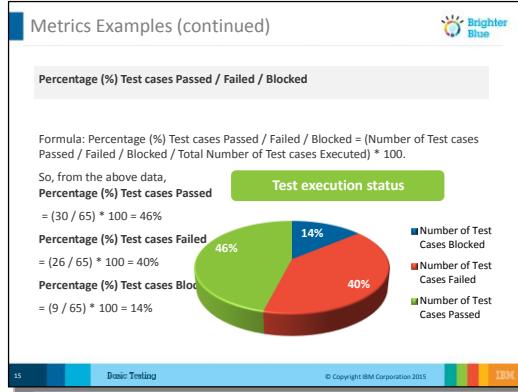
Slide Content	Instructor Guide	Use this space for your own notes
<p>Slide 52</p> <div data-bbox="202 421 720 816" style="border: 1px solid #ccc; padding: 10px;"> <p>Significance of Software Testing Metrics (2 of 3) </p> <p>If Metrics are involved in the project, then the exact status of work with proper numbers or data can be published.</p> <p>In the test report, we can publish:</p> <ul style="list-style-type: none"> 1. How many test cases have been designed per requirement? 2. How many test cases are yet to be designed? 3. How many test cases are executed? 4. How many test cases are passed / failed / blocked? 5. How many test cases are not yet executed? 6. How many defects are identified and what is the severity of those defects? 7. How many test cases have failed due to one particular defect? </div> <p>Based on the project needs, we can have more metrics than the above mentioned list, to know the status of the project in detail.</p>	<p>Purpose: To understand the significance of software testing metrics</p> <p>Approximate Duration: 4 mins</p> <p>What to cover:</p> <ul style="list-style-type: none"> ▪ Discuss the importance of test metrics in a project. ▪ You can talk about how based on the project needs, we can have more metrics in a project. ▪ Refer to the notes section of the slide (also in the Slide Content Column of this document) to explain it further. <ul style="list-style-type: none"> • Explain in detail what we can publish in a test report. 	

Core Testing > Basic Testing > Day 9

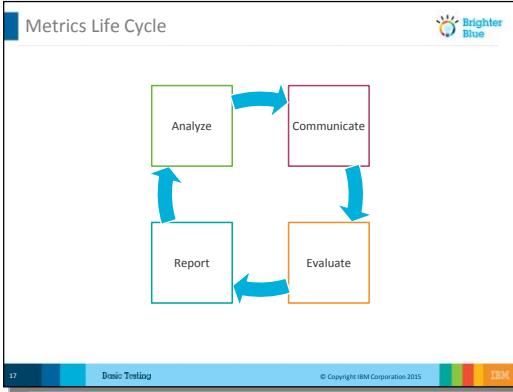
Slide Content	Instructor Guide	Use this space for your own notes
<p>Slide 53</p> <div style="border: 1px solid black; padding: 10px;"> <p>Significance of Software Testing Metrics (3 of 3) </p> <p>Based on the metrics (on the previous slide), test lead or manager will get the understanding of the below mentioned key points:</p> <ul style="list-style-type: none"> ▶ Percentage (%) of work completed ▶ Percentage (%) of work yet to be completed ▶ Time to complete the remaining work ▶ Whether the project is going as per the schedule or lagging, and so on <p>12 Basic Testing © Copyright IBM Corporation 2015 </p> </div> <p>Based on the metrics, if the project is not going to complete as per the schedule, then the manager will raise the alarm to the client and other stake holders by providing the reasons for lagging to avoid the last minute surprises.</p>	<p>Purpose: To understand the significance of software testing metrics</p> <p>Approximate Duration: 4 mins</p> <p>What to cover:</p> <ul style="list-style-type: none"> ▪ Explain to the class how based on the metrics, the test lead or manager understands if a project is on schedule or lagging behind. ▪ The manager will also understand the time that it would take to complete a project. 	

Slide Content	Instructor Guide	Use this space for your own notes																																										
<p>Slide 54</p> <div style="border: 1px solid #ccc; padding: 10px;"> <p>Example of Measurements</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>S. Number</th> <th>Testing</th> <th>Data retrieved during test case development and execution</th> </tr> </thead> <tbody> <tr><td>1</td><td>Number of Requirements</td><td>5</td></tr> <tr><td>2</td><td>Avg. Number of Test cases written per Requirement</td><td>20</td></tr> <tr><td>3</td><td>Total Number of Test cases written for all Requirements</td><td>100</td></tr> <tr><td>4</td><td>Total Number of Test cases Executed</td><td>65</td></tr> <tr><td>5</td><td>Number of Test cases Passed</td><td>30</td></tr> <tr><td>6</td><td>Number of Test cases Failed</td><td>26</td></tr> <tr><td>7</td><td>Number of Test cases Blocked</td><td>9</td></tr> <tr><td>8</td><td>Number of Test cases not executed</td><td>35</td></tr> <tr><td>9</td><td>Total Number of Defects identified</td><td>30</td></tr> <tr><td>10</td><td>Critical Defects count</td><td>6</td></tr> <tr><td>11</td><td>High Defects Count</td><td>10</td></tr> <tr><td>12</td><td>Medium Defects Count</td><td>6</td></tr> <tr><td>13</td><td>Low Defects Count</td><td>8</td></tr> </tbody> </table> <p>53 Basic Testing © Copyright IBM Corporation 2015 IBM</p> </div>	S. Number	Testing	Data retrieved during test case development and execution	1	Number of Requirements	5	2	Avg. Number of Test cases written per Requirement	20	3	Total Number of Test cases written for all Requirements	100	4	Total Number of Test cases Executed	65	5	Number of Test cases Passed	30	6	Number of Test cases Failed	26	7	Number of Test cases Blocked	9	8	Number of Test cases not executed	35	9	Total Number of Defects identified	30	10	Critical Defects count	6	11	High Defects Count	10	12	Medium Defects Count	6	13	Low Defects Count	8	<p>Purpose: To view example of measurements</p> <p>Approximate Duration: 2 mins</p> <p>What to cover:</p> <ul style="list-style-type: none"> ▪ Show an example of measurements (table) to the class. ▪ You can pick up a few rows and columns and explain measurements. 	
S. Number	Testing	Data retrieved during test case development and execution																																										
1	Number of Requirements	5																																										
2	Avg. Number of Test cases written per Requirement	20																																										
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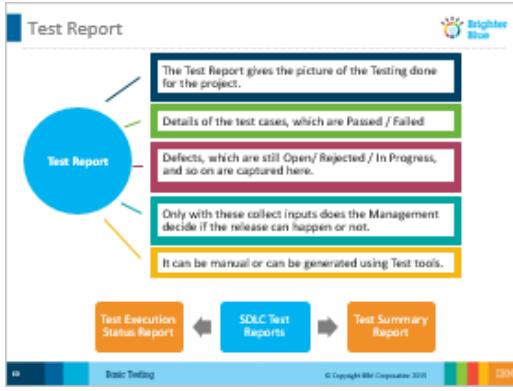
Slide Content	Instructor Guide	Use this space for your own notes
<p>Slide 55</p> <p>Metrics Examples</p> <p>Percentage (%) Test Cases Executed: This metric is used to obtain the execution status of the test cases in terms of Percentage (%).</p> <p>Percentage (%) Test cases Executed = (Number of Test cases executed / Total Number of Test cases written) * 100.</p> <p>So, from the above data, Percentage (%) Test cases Executed = $(65 / 100) * 100 = 65\%$</p> <p>Test execution completion percentage (%)</p>  <p>■ Number of Test Cases not executed ■ Total Number of Test Cases Executed</p> <p>14 Basic Testing © Copyright IBM Corporation 2015 IBM</p>	<p>Purpose: To view examples of metrics</p> <p>Approximate Duration: 5 mins</p> <p>What to cover:</p> <ul style="list-style-type: none"> ▪ Show how Percentage (%) Test Cases Executed is computed. ▪ This metric is used to obtain the execution status of the test cases in terms of Percentage (%). ▪ Explain with the help of an example. 	

Slide Content	Instructor Guide	Use this space for your own notes
<p>Slide 56</p> <p>Metrics Examples (continued)</p> 	<p>Purpose: To view examples of metrics</p> <p>Approximate Duration: 3 - 4 mins</p> <p>What to cover:</p> <ul style="list-style-type: none"> ▪ Show how Percentage (%) Test Cases Passed / Failed / Blocked or computed. ▪ Write down the formula for a better understanding of the class: <ul style="list-style-type: none"> ○ $(\text{Number of Test cases Passed / Failed / Blocked} / \text{Total Number of Test cases Executed}) * 100$. 	

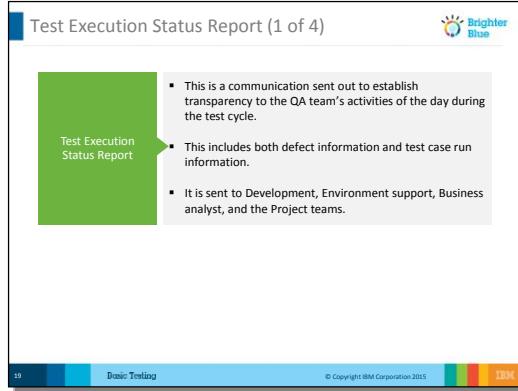
Slide Content	Instructor Guide	Use this space for your own notes
<p>Slide 57</p> 	<p>Purpose: To learn the benefits of metrics</p> <p>Approximate Duration: 5 mins</p> <p>What to cover:</p> <ul style="list-style-type: none"> ▪ Explain the benefits of metrics to the participants. ▪ Enlighten the participants about the relevance of metrics in recent times. 	

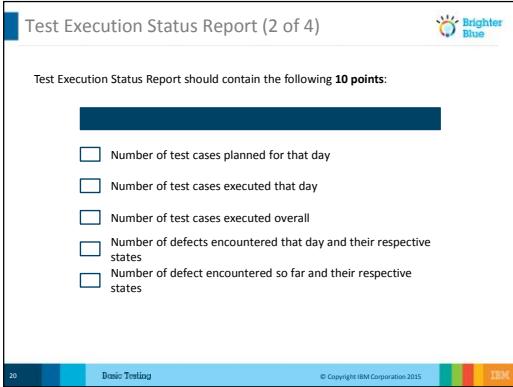
Slide Content	Instructor Guide	Use this space for your own notes
<p>Slide 58</p>  <p>Analyze:</p> <ul style="list-style-type: none"> ▪ Identify the Test Metrics ▪ Define the identified Metrics <p>Communicate:</p> <ul style="list-style-type: none"> ▪ Explain the need of metric to stakeholder and testing team. ▪ Educate the testing team about the data points that need to be captured for processing the metric. 	<p>Purpose: To learn about the Metrics Life Cycle</p> <p>Approximate Duration: 5 mins</p> <p>What to cover:</p> <ul style="list-style-type: none"> ▪ Explain the stages of the Metrics Life Cycle. ▪ Refer to the notes section of the slide (also in the Slide Content Column of this document) to explain it further. 	

Slide Content	Instructor Guide	Use this space for your own notes
<p>Evaluate:</p> <ul style="list-style-type: none">▪ Capture and verify data.▪ Calculating the metric(s) value using the data captured. <p>Generate:</p> <ul style="list-style-type: none">▪ Develop the report with effective conclusion.▪ Distribute report to the stakeholder and respective representative.▪ Take feedback from stakeholder.		

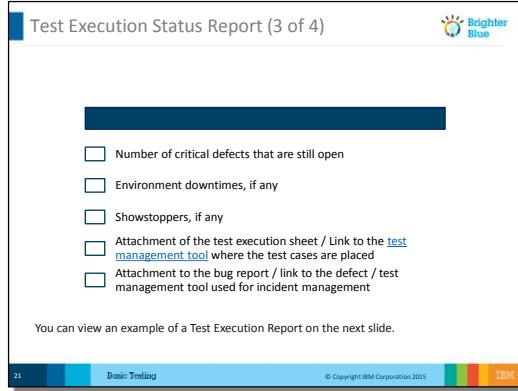
Slide Content	Instructor Guide	Use this space for your own notes
<p>Slide 59</p>  <p>Test reports used in the SDLC:</p> <ul style="list-style-type: none"> ▪ Test Execution Status Report ▪ Test Summary Report 	<p>Purpose: To understand and define a Test Report</p> <p>Approximate Duration: 5 mins</p> <p>What to cover:</p> <ul style="list-style-type: none"> • Identify the features of a test report. • Discuss the two types of reports used in the SDLC. • Explain the relevance and importance of a test report in the program. 	

Core Testing > Basic Testing > Day 9

Slide Content	Instructor Guide	Use this space for your own notes
<p>Slide 60</p>  <p>The slide content shows a presentation slide titled "Test Execution Status Report (1 of 4)" with the Brighter Blue logo. A callout box highlights the following points:</p> <ul style="list-style-type: none"> This is a communication sent out to establish transparency to the QA team's activities of the day during the test cycle. This includes both defect information and test case run information. It is sent to Development, Environment support, Business analyst, and the Project teams. <p>At the bottom of the slide, there is navigation information: "10" (navigation arrow), "Basic Testing" (title), "© Copyright IBM Corporation 2015" (copyright), and the IBM logo.</p>	<p>Purpose: To define Test Execution Status Report</p> <p>Approximate Duration: 3 mins</p> <p>What to cover:</p> <ul style="list-style-type: none"> Provide a definition of Test Execution Status Report. You can talk about the following points: <ul style="list-style-type: none"> This is a communication sent out to establish transparency to the QA team's activities of the day during the test cycle. This includes both defect information and test case run information. It is sent to Development, Environment support, Business analyst, and the Project teams. 	

Slide Content	Instructor Guide	Use this space for your own notes
<p>Slide 61</p> 	<p>Purpose: To describe Test Execution Status Report</p> <p>Approximate Duration: 5 mins</p> <p>What to cover:</p> <ul style="list-style-type: none"> ▪ Explain the points to be included in the test execution status report. ▪ Tell the class that a Test Execution Status Report should contain 10 points. Briefly explain these points. 	

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Slide Content	Instructor Guide	Use this space for your own notes
<p>Slide 62</p>  <p>You can view an example of a Test Execution Report on the next slide.</p>	<p>Purpose: To define Test Execution Status Report</p> <p>Approximate Duration: 3 mins</p> <p>What to cover:</p> <ul style="list-style-type: none"> Explain the points to be included in the test execution status report. Ask the participants if they have any query. 	

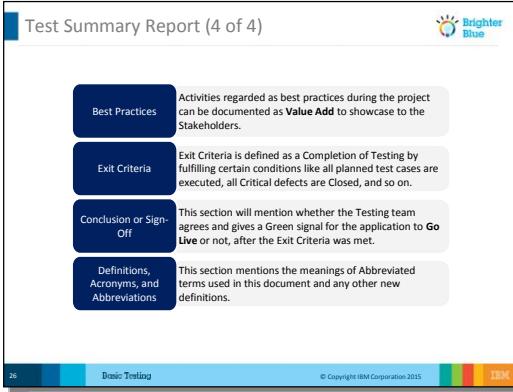
Slide Content	Instructor Guide	Use this space for your own notes
<p>Slide 63</p> <div style="border: 1px solid #ccc; padding: 10px;"> <p>Test Summary Report (1 of 4)</p> <div style="display: flex; justify-content: space-between;"> Test Summary Report Brighter Blue </div> <div style="margin-top: 10px;"> <ul style="list-style-type: none"> ▪ Test Summary Report is an important deliverable which is prepared at the end of a Testing project, or rather after Testing is completed. ▪ The prime objective of this document is to explain various details and activities about the Testing performed for the project to the respective stakeholders like senior management, client, and so on. ▪ As part of Test execution report, daily testing results are shared with involved stakeholders every day. But Test Summary Report provides a consolidated report on the Testing performed so far for the project. </div> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> Basic Testing © Copyright IBM Corporation 2010 IBM </div> </div>	<p>Purpose: To describe a Test Summary Report</p> <p>Approximate Duration: 20 mins</p> <p>What to cover:</p> <ul style="list-style-type: none"> ▪ This topic will be covered over four screens. You can start with the definition of Test Summary Report. ▪ You can say: <ul style="list-style-type: none"> ○ Test Summary Report is an important deliverable which is prepared at the end of a Testing project, or rather after Testing is completed. ▪ Also say, Test Summary Report provides a consolidated report on the Testing performed so far for the project. 	

Slide Content	Instructor Guide	Use this space for your own notes								
<p>Slide 64</p> <div style="border: 1px solid #ccc; padding: 10px;"> <p>Test Summary Report (2 of 4) </p> <p>A Test Summary Status Report should contain the below sections:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 5px;">Purpose of the document</td> <td style="padding: 5px;">Short description about the objective of preparing the document.</td> </tr> <tr> <td style="padding: 5px;">Application Overview</td> <td style="padding: 5px;">Brief description about the application tested.</td> </tr> <tr> <td style="padding: 5px;">Testing Scope</td> <td style="padding: 5px;">This section explains the functions / modules in scope and out of scope for testing; any item which is not tested due to any constraints / dependencies / restrictions.</td> </tr> <tr> <td style="padding: 5px;">Metrics</td> <td style="padding: 5px;">Metrics will help to understand the test execution results, status of test cases and defects, and so on.</td> </tr> </table> <p>24 Basic Testing © Copyright IBM Corporation 2015 </p> <ul style="list-style-type: none"> ▪ Purpose of the document: Short description about the objective of preparing the document. ▪ Application Overview: Brief description about the application tested. ▪ Testing Scope: This section explains about the functions / modules in scope and out of scope for testing; any items which are not tested due to any constraints / dependencies / restrictions. </div>	Purpose of the document	Short description about the objective of preparing the document.	Application Overview	Brief description about the application tested.	Testing Scope	This section explains the functions / modules in scope and out of scope for testing; any item which is not tested due to any constraints / dependencies / restrictions.	Metrics	Metrics will help to understand the test execution results, status of test cases and defects, and so on.	<p>Purpose: To describe a Test Summary Report</p> <p>Approximate Duration: 20 mins</p> <p>What to cover:</p> <ul style="list-style-type: none"> ▪ You have given a definition of the Test Summary Report. Now discuss the importance of test summary report. ▪ Talk about the points that should be included in a test summary report. ▪ Refer to the notes section of the slide (also in the Slide Content Column of this document) to explain it further. 	
Purpose of the document	Short description about the objective of preparing the document.									
Application Overview	Brief description about the application tested.									
Testing Scope	This section explains the functions / modules in scope and out of scope for testing; any item which is not tested due to any constraints / dependencies / restrictions.									
Metrics	Metrics will help to understand the test execution results, status of test cases and defects, and so on.									

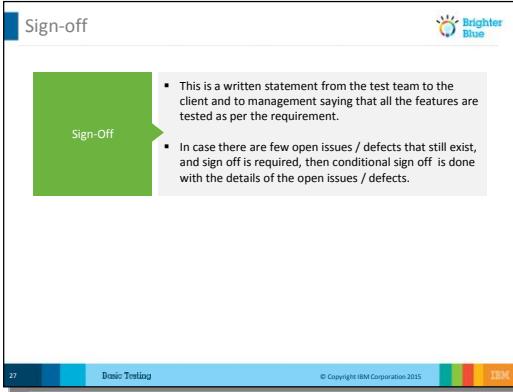
Slide Content	Instructor Guide	Use this space for your own notes
<ul style="list-style-type: none">▪ Metrics: Metrics will help to understand the test execution results, status of test cases and defects, and so on. Required Metrics can be added as necessary. For example: Defect Summary-Severity wise; Defect Distribution-Function/Module wise; Defect Ageing and so on, Charts / Graphs can be attached for better visual representation.		

Slide Content	Instructor Guide	Use this space for your own notes
<p>Slide 65</p>  <ul style="list-style-type: none"> ▪ Types of testing performed: Describe the various types of Testing performed for the Project. This will make sure the application is being tested properly through testing types agreed as per Test Strategy. ▪ Test Environment and tools: Provide details on Test Environment in which the Testing is carried out; Server, Database, Application URL and so on. If any Tools were used like Quality Center (now HP ALM) for logging defects. 	<p>Purpose: To describe a Test Summary Report</p> <p>Approximate Duration: 20 mins</p> <p>What to cover:</p> <ul style="list-style-type: none"> ▪ Describe the various types of testing performed in a project. ▪ Refer to the notes section of the slide (also in the Slide Content Column of this document) to explain it further. 	

Slide Content	Instructor Guide	Use this space for your own notes
<ul style="list-style-type: none">▪ Lessons Learned: This section is used to describe the critical issues faced and their solutions (how they were solved during the Testing). Lessons learned will help to make proactive decisions during the next Testing engagement, by avoiding these mistakes or finding a suitable workaround.▪ Recommendations: Any workaround or suggestions can be mentioned here.		

Slide Content	Instructor Guide	Use this space for your own notes
<p>Slide 66</p>  <p>The slide content includes a navigation bar at the bottom with tabs for 'Basic Testing' and 'IBM'. The main area contains four sections: 'Best Practices' (Activities regarded as best practices during the project can be documented as Value Add to showcase to the Stakeholders.), 'Exit Criteria' (Exit Criteria is defined as a Completion of Testing by fulfilling certain conditions like all planned test cases are executed, all Critical defects are Closed, and so on.), 'Conclusion or Sign-Off' (This section will mention whether the Testing team agrees and gives a Green signal for the application to Go Live or not, after the Exit Criteria was met.), and 'Definitions, Acronyms, and Abbreviations' (This section mentions the meanings of Abbreviated terms used in this document and any other new definitions.).</p> <ul style="list-style-type: none"> ▪ Best Practices: There will be lot of activities done by the Testing team during the project. Some of them could have saved time, some proved to be a good and efficient way to work, and so on. These can be documented as a Value Add to showcase to the Stakeholders. ▪ Exit Criteria: Exit Criteria is defined as a Completion of Testing by fulfilling certain conditions like: 	<p>Purpose: To describe a Test Summary Report</p> <p>Approximate Duration: 20 mins</p> <p>What to cover:</p> <ul style="list-style-type: none"> ▪ You have already given a definition of the Test Summary Report and discussed its importance. ▪ You have also talked about the various types of testing performed in a project. ▪ Now talk about the best practices in a project. ▪ Refer to the notes section of the slide (also in the Slide Content Column of this document) to explain it further. 	

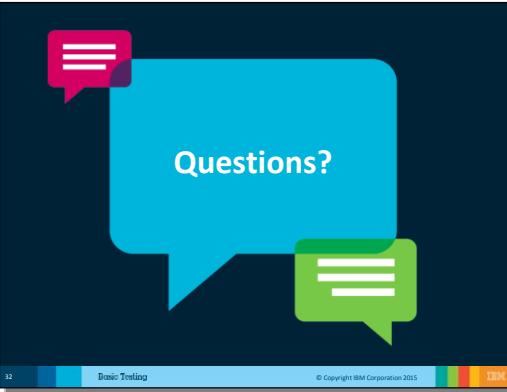
Slide Content	Instructor Guide	Use this space for your own notes
<ul style="list-style-type: none"> a. All planned test cases are executed; b. All Critical defects are Closed and so on. ▪ Conclusion / Sign Off: This section will mention whether the Testing team agrees and gives a Green signal for the application to Go Live or not, after the Exit Criteria was met. If the application does not meet the Exit Criteria, then it can be mentioned as– the application is not suggested to Go Live. It will be left with the decision of Senior Management and Client and other Stakeholders involved to take the call on whether the application can Go Live or not. ▪ Definitions, Acronyms, and Abbreviations: This section mentions the meanings of Abbreviated terms used in this document and any other new definitions. 		

Slide Content	Instructor Guide	Use this space for your own notes
<p>Slide 67</p>  <p>As we have to notify all the stakeholders that testing has begun, it is also the QA team's duty to let everyone know that testing has been complete and share the results. So, typically an email is sent from the QA team (usually the team lead / QA manager) giving an indication that QA team has signed off on the product attaching the test results and the list of open or known issues.</p>	<p>Purpose: To define a Sign-off</p> <p>Approximate Duration: 3 mins</p> <p>What to cover:</p> <ul style="list-style-type: none"> ▪ Provide a definition of a Sign-off. It is a written statement from the test team to the client and to management saying that all the features are tested as per the requirement. ▪ Refer to the notes section of the slide (also in the Slide Content Column of this document) to explain it further. 	

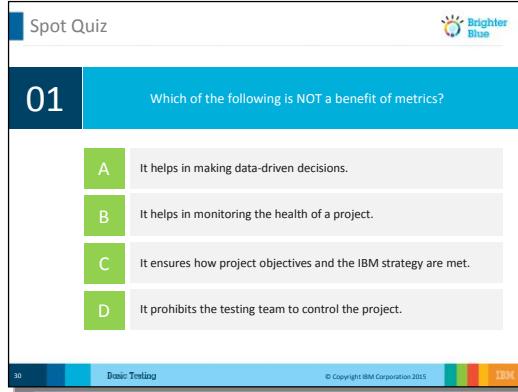
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Slide Content	Instructor Guide	Use this space for your own notes
<p>Slide 68</p> <div style="border: 1px solid #ccc; padding: 10px;"> <p>Sample Sign-off Email</p> <p>To: Client, PM, Dev team, DB team, BA, QA team, Environment Team (and anyone else that needs to be included)</p> <p>Hello Team,</p> <p>The QA team signs-off on the Orange HRM version 3.0 software after the successful completion of the 2 cycles of functional testing the website.</p> <p>The test cases and their execution results are attached to the email. (Or mention the location where they are present. If using test management software, provide details regarding the same.)</p> <p>The list of known issues is attached to the email too. (Again, any other references that make sense can be added.)</p> <p>Thanks, QA team lead.</p> </div> <p>28 Basic Testing © Copyright IBM Corporation 2015 </p>	<p>Purpose: To view an example of a sign-off email</p> <p>Approximate Duration: 2 mins</p> <p>What to cover:</p> <ul style="list-style-type: none"> ■ Discuss the content of a sign-off email. 	

Slide Content	Instructor Guide	Use this space for your own notes
<p>Slide 69</p>  <ul style="list-style-type: none"> ▪ Create your own sample sign-off email based on the example found in the previous slide. ▪ Make sure you include all the relevant details as what was discussed. 	<p>Purpose: To apply the concepts of writing a sign-off email</p> <p>Approximate Duration: 10 mins</p> <p>Additional Materials or Pre-session prep tasks:</p> <ul style="list-style-type: none"> ▪ Easel sheets / paper ▪ Pens <p>What to cover:</p> <ul style="list-style-type: none"> ▪ Discuss how the participants should write a sign-off email. <p>Instructions for the participant:</p> <ul style="list-style-type: none"> ▪ Break the class into small groups (2-3 depending on the number of participants), or individually. ▪ Have participants to create their own sample sign-off email. <p>Debrief:</p> <ul style="list-style-type: none"> ▪ Point out the relevant information or content needed for each successful sign-off. 	

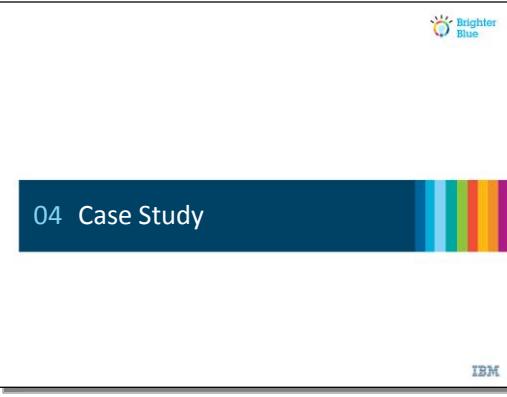
Slide Content	Instructor Guide	Use this space for your own notes
<p>Slide 70</p> 	<p>Approximate Duration: 5 mins</p> <p>What to cover:</p> <ul style="list-style-type: none"> • Ask the participants if they have any questions. • Include any questions that will be addressed later in the course as parking lot items. • Use this activity to recap the key takeaways from this module. • You are the end of this module. The participants should now be able to: <ul style="list-style-type: none"> - Define test metrics - Recall the difference between measurements and metrics - Understand the significance of software testing metrics - List the benefits of metrics - Understand the metrics life cycle - Recall the types of test reports, such as test execution and test summary report 	

Slide Content	Instructor Guide	Use this space for your own notes
	<ul style="list-style-type: none">- Understand sign-offs	

Slide Content	Instructor Guide	Use this space for your own notes
<p>Slide 71</p>  <p>The slide shows a 'Spot Quiz' interface. Question 01 asks: "Which of the following is NOT a benefit of metrics?" The options are A: It helps in making data-driven decisions., B: It helps in monitoring the health of a project., C: It ensures how project objectives and the IBM strategy are met., and D: It prohibits the testing team to control the project. The correct answer is D.</p>	<p>Purpose: To check for understanding of the topics covered</p> <p>Approximate Duration: 5 mins</p> <p>What to cover:</p> <ul style="list-style-type: none"> ▪ Ask the participants the question on the slide. Treat the question as a poll – Ask them to raise their hands based on the answer. ▪ The correct answer is d) It prohibits the testing team to control the project. ▪ Explain why D is the correct answer. For each incorrect answer, first explain why it is incorrect and then point out the correct answer. 	

Slide Content	Instructor Guide	Use this space for your own notes
<p>Slide 72</p>  <p>02 Which of the following is included in a test summary report?</p> <ul style="list-style-type: none"> A Names of the Testing Team B Testing Scope C Weekly Showstoppers D Team Assignments <p>31 Basic Testing © Copyright IBM Corporation 2015 IBM</p>	<p>Purpose: To check for understanding of the topics covered</p> <p>Approximate Duration: 5 mins</p> <p>What to cover:</p> <ul style="list-style-type: none"> Ask the participants the question on the slide. Treat the question as a poll – Ask them to raise their hands based on the answer. The correct answer is b) Testing Scope Explain why B is the correct answer. For each incorrect answer, first explain why it is incorrect and then point out the correct answer. 	

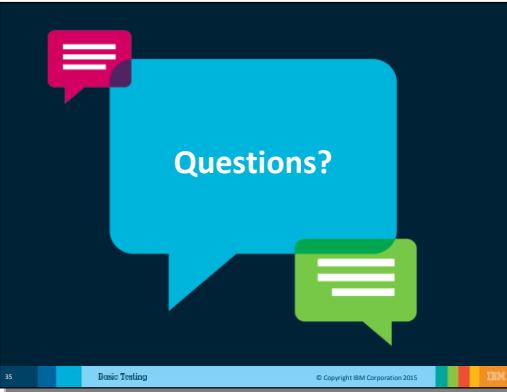
Module 04: Case Study

Slide Content	Instructor Guide	Use this space for your own notes
<p>Slide 73</p> 	<p>Purpose: Introduction to the Case Study.</p> <p>Duration: 2 mins</p> <p>What to cover:</p> <ul style="list-style-type: none">Tell the participants that it's time for another Test Case using the GH Online Money Transfer Case Study.	

Slide Content	Instructor Guide	Use this space for your own notes
<p>Slide 74</p> <div style="border: 1px solid black; padding: 10px;"> <p>Case Study: Day 9—Defect Management and Reporting </p> <p>Let us get started with the some real life case studies now. Here is what you need to do:</p> <ul style="list-style-type: none"> ▪ Work with your team as per instructions from the facilitator ▪ Discuss the various reporting options of RQM and defect reports to analyze the status of the test project among the team ▪ The observer will note down the key points from the discussion ▪ Share your key takeaways with the class based on the discussion (30 mins) <p> Microsoft Word 17 - 2003 Document</p> <p>34 Basic Testing © Copyright IBM Corporation 2015 IBM</p> </div>	<p>Approximate Duration: 20 mins</p> <p>Additional Materials or Pre-session prep tasks:</p> <ul style="list-style-type: none"> ▪ Ensure that PCs have minimum 2.93 GHz Processor and 4 GB RAM (minimum 2GB), and 100 GB hard disk space ▪ Software requirements: <ul style="list-style-type: none"> ○ Platform: Microsoft Windows ○ Operating System (OS): Microsoft Windows XP SP3 or higher ○ Browser: Internet Explorer 8 and / or above ○ Technologies used: Java/J2EE, JSP, XML, and Tomcat ○ Software Tools: Rational Quality Manager (RQM) 4.0.3.1 for Test Management ○ Database: MySQL ○ Testing: Manual and RFT for Automation <p>What to cover:</p>	

Slide Content	Instructor Guide	Use this space for your own notes
	<ul style="list-style-type: none"> ▪ Work with your team as per instructions from the facilitator ▪ Discuss the various reporting options of RQM and defect reports to analyze the status of the test project among the team ▪ The observer will note down the key points from the discussion ▪ Share your key takeaways with the class based on the discussion (30 mins) <p>Purpose: To show how to review the test cases and record the review observations and comments using RQM or OPAL template</p> <p>Instructions for the participant:</p> <ul style="list-style-type: none"> ▪ Work with your team as per instructions from the facilitator ▪ Discuss the various reporting options of RQM and defect reports to analyze the status of the test project among the team ▪ The observer will note down the key points from the discussion ▪ Share your key takeaways with the class based on the discussion (30 mins) 	

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	<p>Debrief:</p> <ul style="list-style-type: none">▪ Explain the reporting options of RQM need to be discussed and defect reports to analyze the status of the test project	

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<p>Slide 75</p> 	<p>Approximate Duration: 5 mins</p> <p>What to cover:</p> <ul style="list-style-type: none"> ▪ Ask the participants if they have any questions. ▪ Include any questions that will be addressed later in the course as parking lot items ▪ Use this activity to recap the key takeaways from this module 	