



**BruteForce** Solutions Inc.  
creating path for success...



# *Testing Technique*

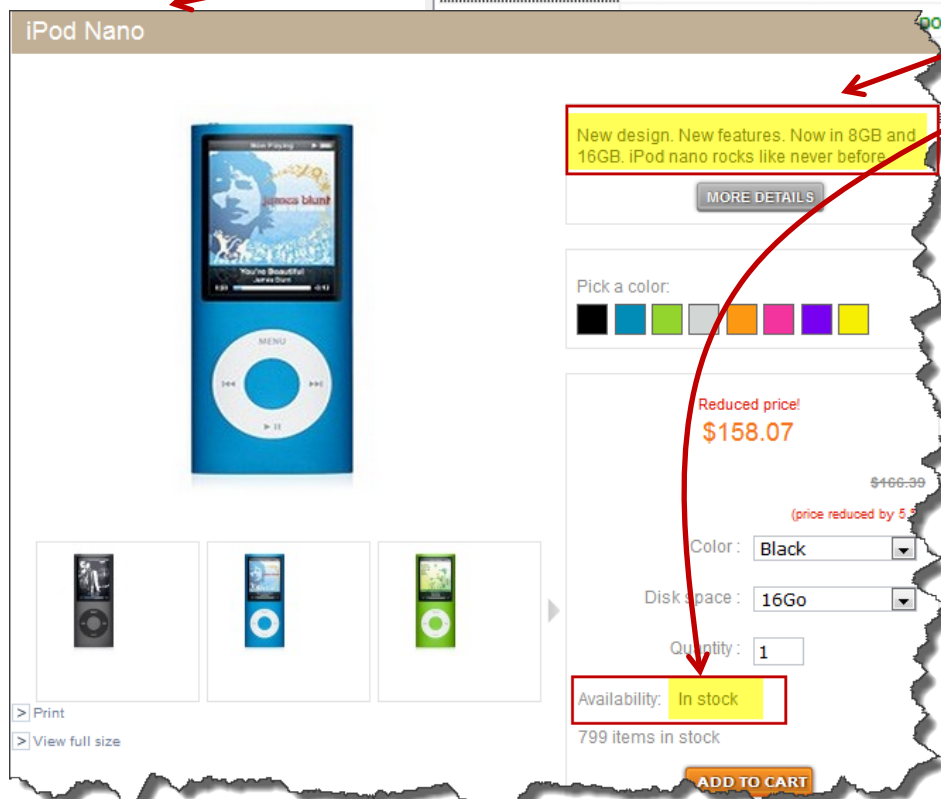
# Front-End vs Backend Testing



Host: 127.0.0.1 Database: bruteforce\_db Table: bfs\_order\_message\_lang Data Query\*

```
1
2 select name, description_short, available_now from bfs_product_lang
3
```

name	description_short	available_now
iPod Nano	<p>New design. New features. Now in 8GB and 16GB. iPod nano rocks like never before </p>	In stock
MacBook Air	MacBook Air is ultrathin, ultraportable, and ultra unlike anything else. But you don't lose inches a... portable et ultra différent de tout le reste. Mais on ne perd pas d...	



**FRONT END** Testing is verifying the functionality, GUI and Usability.

**BACK END** Testing is Verifying that how the application interact with database, interface communication.

# Black Box Testing



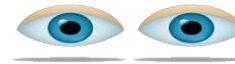
Requirements Document

Validate output



Inputs

Software under test  
(Black Box)



Outputs

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**CART** ▲

1x iPod Nano  
Black, 16Go

\$158.07

Shipping \$7.00  
Total \$165.07

[CART](#) [CHECK OUT](#)

**CATEGORIES**

- IPODS
- ACCESSORIES
- LAPTOPS

**MANUFACTURERS**

- APPLE COMPUTER, INC

Home > iPods > iPod Nano

iPod Nano



[MORE DETAILS](#)

Pick a color:



Reduced price!  
**\$158.07**

\$466.99

Black box testing also known as functional testing without knowing the internal logic or structure.

[Print](#)  
[View full size](#)

Availability: In stock

799 items in stock

[ADD TO CART](#)



# White Box Testing




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**CART**  
1xiPod Nano \$158.07  
Black, 16Go  
Shipping \$7.00  
Total \$165.07  
**CART** **CHECK OUT**


- CATEGORIES**
- ▶ IPODS
  - ▶ ACCESSORIES
  - ▶ LAPTOPS

- MANUFACTURERS**
- ▶ APPLE COMPUTER, INC
  - ▶ SHURE INCORPORATED


Home > Apple Comp  
List of product



iPod Nano  
\$158.07  
**VIEW**



iPod shuffle  
\$66.05  
**VIEW**



Host: 127.0.0.1 Database: bruteforce\_db Table: bfs\_manufacturer Data Query\*

```
1  
2 select * from bfs_manufacturer  
3
```

bfs_manufacturer				
id_manufacturer	name	date_add	date_upd	active
1	Apple Computer, Inc	2012-07-15 14:07:36	2012-07-15 14:07:36	1
2	Shure Incorporated	2012-07-15 14:07:36	2012-07-15 14:07:36	1

## White Box Testing


White box testing is performed to validate internal code structure



ebfs.bruteforcesolution.net/ebfs/contact-form.php

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Search

 Cart 3 Products

WOMEN

DRESSES

T-SHIRTS

BRUTEFORCE

 Contact

CUSTOMER SERVICE - CONTACT US

## SEND A MESSAGE

Subject Heading

Customer service

For any question about a product, an order

Email address

Order reference

Attach File

No file selected

Choose File

Send >

Message

Computer > OS (C:) > xampp > htdocs > bfs

Organize Open Share with Burn New folder

★ Favorites

- Desktop
- Downloads
- Google Drive
- Recent Places

Libraries

- Documents
- Music
- Pictures
- Videos

Computer

- OS (C:)
- HP\_RECOVERY (D:)
- CD Drive (H:)

Name	Type	Size
.htaccess	HTACCESS File	2 KB
404.php	PHP File	2 KB
address.php	PHP File	2 KB
addresses.php	PHP File	2 KB
attachment.php	PHP File	2 KB
authentication.php	PHP File	2 KB
best-sales.php	PHP File	2 KB
cart.php	PHP File	2 KB
category.php	PHP File	2 KB
changepcurrency.php	PHP File	2 KB
cms.php	PHP File	2 KB
contact-form.php	PHP File	2 KB
discount.php	PHP File	2 KB
footer.php	PHP File	2 KB
get-file.php	PHP File	10 KB
guest-testing.php	PHP File	2 KB

# Unit Testing



Videos	changeurrency.php	PHP File	2 KB
Computer	cms.php	PHP File	2 KB
OS (C:)	contact-form.php	PHP File	2 KB
	discount.php	PHP File	2 KB
	feedback.php	PHP File	2 KB

```
/* add additional image sizes
function jf_intermediate_image_sizes( $sizes ) {
    $sizes[] = 'carousel';
    return $sizes;
}
add_filter( 'intermediate_image_sizes', 'jf_intermediate_image_sizes' );

/* add search thumbnail settings to the Media page
function jf_add_thumbnail_settings_field() {
    add_settings_field( 'carousel_size_w', 'Carousel thumbnail size', 'jf_add_carousel_thumbnail_settings_field_callback', 'media', 'default' );
}
add_action( 'media_settings', 'jf_add_thumbnail_settings_field' );
```



**Unit Testing to validate code.**



**Typically done by programmer and not by tester, as it requires detailed knowledge of programming and coding.**

```
function jf_add_carousel_thumbnail_settings_field_callback() {
    <label for="carousel_size_w"><?php _e( 'Width' ); ?></label>
    <input name="carousel_size_w" type="text" id="carousel_size_w" value="<?php form_option( 'carousel_size_w' ); ?>" class="small-text" />
    <label for="carousel_size_h"><?php _e( 'Height' ); ?></label>
    <input name="carousel_size_h" type="text" id="carousel_size_h" value="<?php form_option( 'carousel_size_h' ); ?>" class="small-text" />
    <input name="carousel_crop" type="checkbox" id="carousel_crop" value="1" <?php checked( '1', get_option( 'carousel_crop' ) ); ?> />
    <label for="carousel_crop"><?php _e( 'Crop thumbnails to exact dimensions (recommended)' ); ?></label>
}
```

Store  
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Search

WOMEN

DRESSES

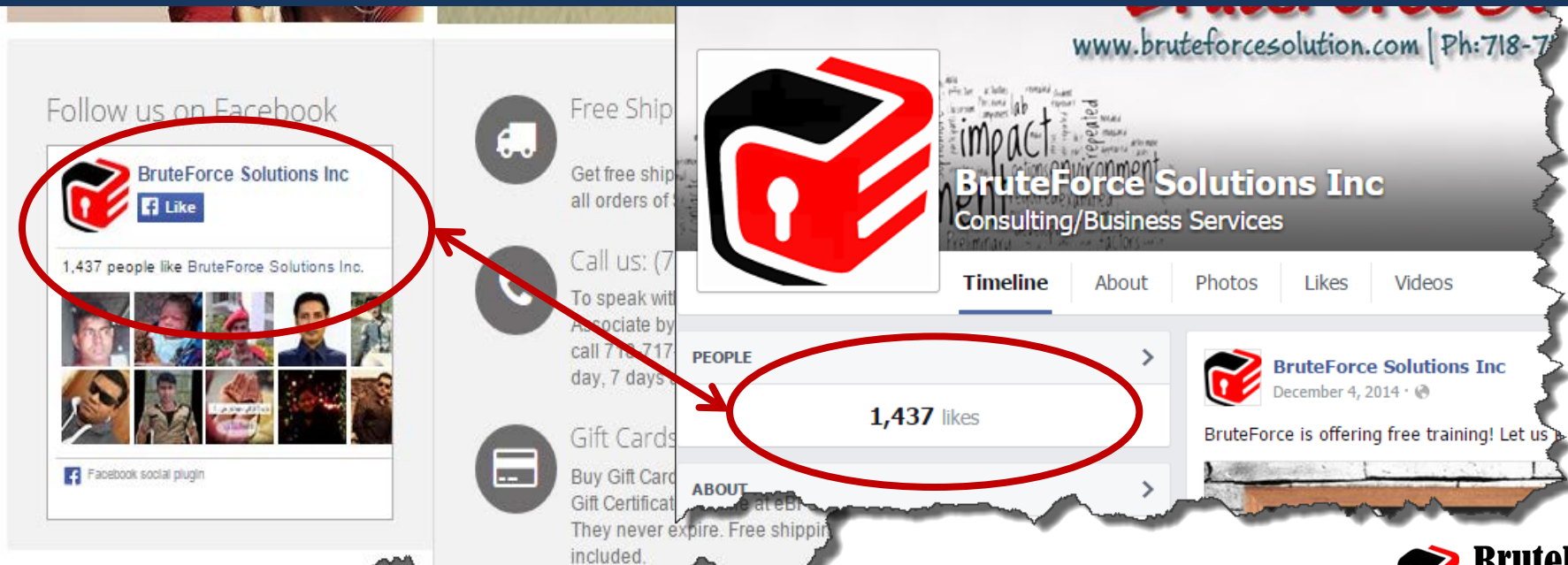
T-SHIRTS

BRUTEFORCE

facebook



https://www.facebook.com/bruteforcesolutionsinc

**Integration Testing is perform to validate whether two components/application/modules combined functionally works together**



























The screenshot shows the Facebook profile of BruteForce Solutions Inc. A red circle highlights the company name and logo in the 'Follow us on Facebook' section. A red arrow points from this circle to another red circle that highlights the '1,437 likes' count in the 'PEOPLE' section. The main header of the page includes the company logo, website URL (www.bruteforcesolution.com), and phone number (Ph: 718-718-7187). The page also features a 'Free Ship' offer, contact information, and a 'Gift Cards' section. The 'PEOPLE' section shows a grid of profile pictures of people who liked the page.

Follow us on Facebook

 **BruteForce Solutions Inc** 

1,437 people like BruteForce Solutions Inc.

# Functional Testing



Testing functionality of an application as per the requirements or customer needs and expectations.

A requirement specifies a function that a system or component must be able to perform.

## Validation:

1. Price filed is not empty
2. Click Add to cart; Cart should reflect the product price details

The screenshot shows a shopping cart interface. On the left, a product listing for 'Faded Short Sleeve T-shirts' is shown with a unit price of \$25.51 and a quantity of 2. The total for this item is \$51.02. On the right, a cart summary shows the total products as \$51.02, total shipping as \$2.00, and a grand total of \$53.02. Red circles highlight the unit price, quantity, item total, shipping, and grand total. Arrows indicate the flow of data from the product listing to the cart summary.

Product	Description	Avail.	Unit price	Qty
	Faded Short Sleeve T-shirts SKU : shohag Color : Orange, Size : S	In stock	\$25.51	2

Cart Summary	
2 x Faded...	\$51.02
Shipping	\$2.00
Total	\$53.02




Product Details	
Total products	\$51.02
Total shipping	\$2.00
TOTAL	\$53.02

< Continue shopping






Testing the application without planning and documentation (Requirement and Test cases).

## **Benefits:**

-  Exploratory testing takes less preparation.
-  Defects are found very quickly.
-  The testers can use reasoning based approach on the results of previous results to guide their future testing on the fly.

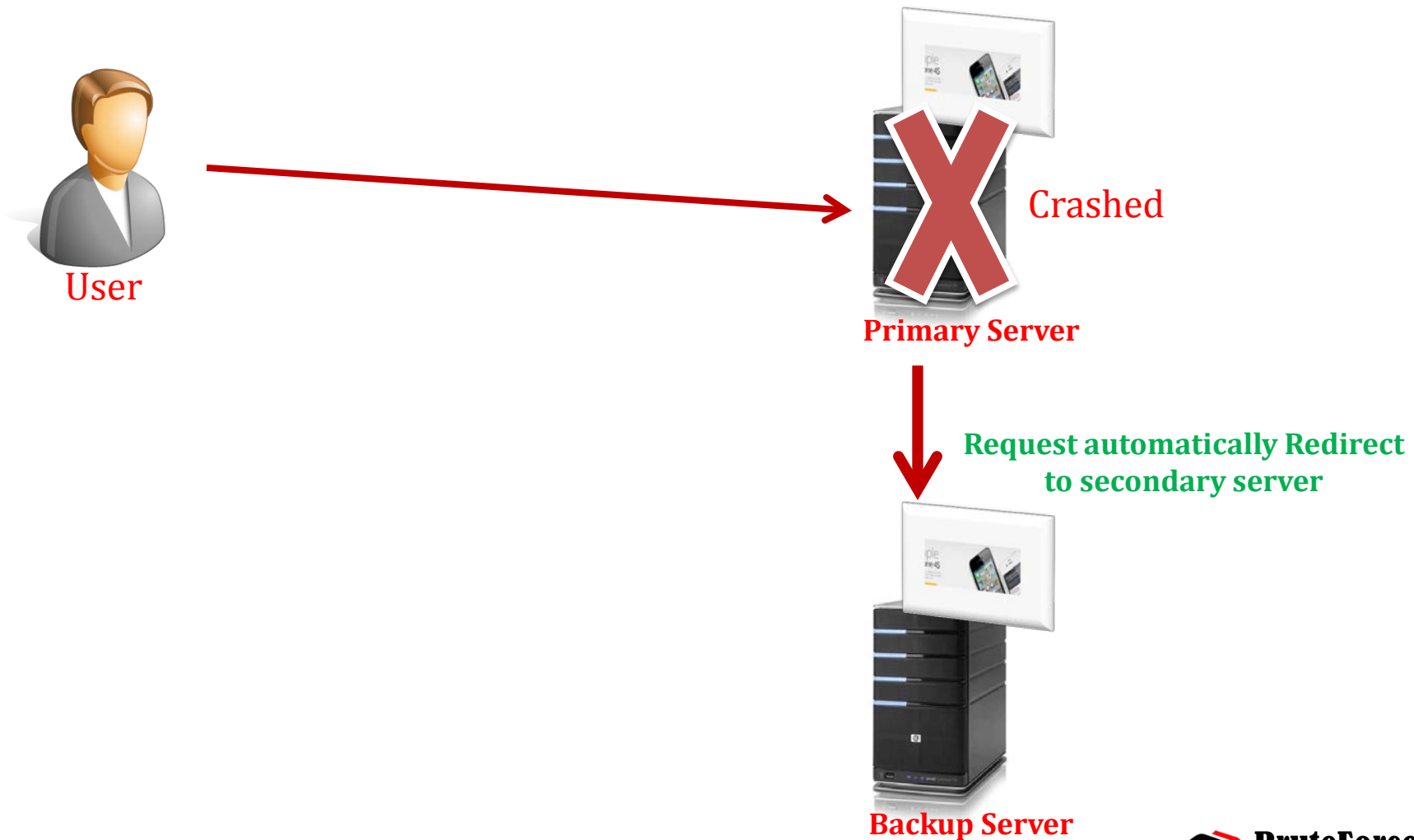
## **Drawbacks:**

-  Tests cannot be reviewed.
-  It is difficult to keep track of what tests have been tested.
-  It is unlikely to be performed in exactly the same manner and to repeat specific details of the earlier tests.

# Failover Testing



Failover testing is to ensure whether the secondary server works appropriately when primary server fail.



System testing is the process of testing the entire system. System testing starts after integration of all the components in the application are complete.

Home > Shipping

## Shipping

Summary Login Address **Shipping** Payment

1 2 3 4 5

Terms of service

☐ I agree to the terms of service and adhere to them unconditionally. (read)

Choose your delivery method

☒ I agree to receive my order in recycled packaging.

CARRIER	INFORMATION	PRICE
<input type="checkbox"/> My carrier	Delivery next day!	\$7.00 (tax excl.)
<input type="checkbox"/> <b>PayPal</b>	Delivery next day!	\$7.00 (tax excl.)

Gift

☐ I would like the order to be gift-wrapped.

« PREVIOUS

Paypal module added

NEXT »



# End to End Testing



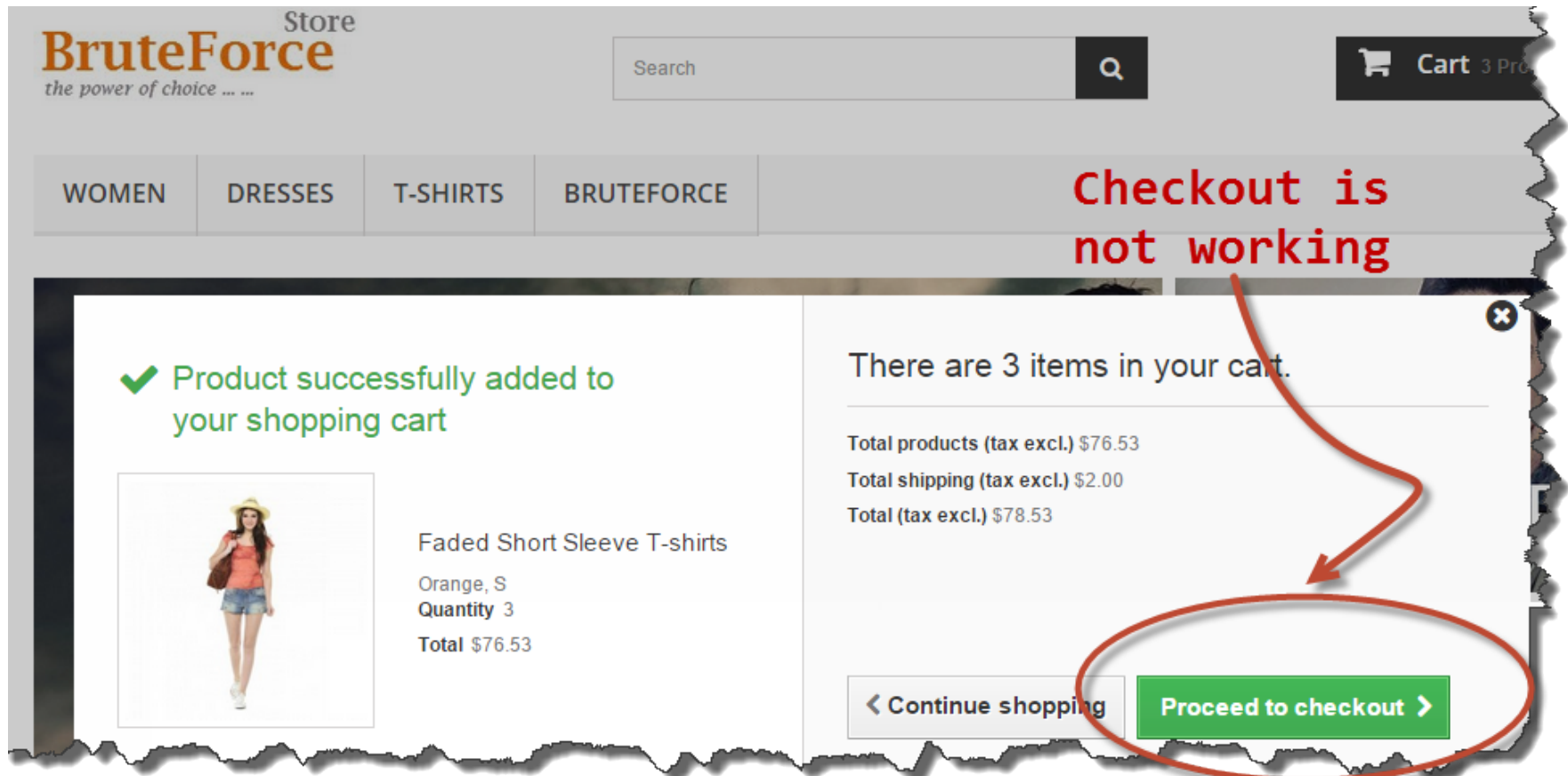
Testing an application from the beginning to the end which ensures all the functionality works as expected is called end to end testing . End-to-end testing is very similar to system testing.

For example,

Accepting an order from a customer and then processing that order all the way through fulfillment, accounting and shipping. This is basically exercising an entire “workflow”.



**Smoke Testing** is conducted to ensure whether the most crucial functions of an application are working, but not bothering with details. (also known as build verification). Smoke testing is normal health check up to a build of an application before taking it to testing in depth



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Search

Cart 3 Products

WOMEN DRESSES T-SHIRTS BRUTEFORCE

**Checkout is not working**

✓ Product successfully added to your shopping cart



Faded Short Sleeve T-shirts  
Orange, S  
Quantity 3  
Total \$76.53

There are 3 items in your cart.

Total products (tax excl.) \$76.53  
Total shipping (tax excl.) \$2.00  
Total (tax excl.) \$78.53

< Continue shopping Proceed to checkout >

# Regression Testing



- Regression testing is the process of testing to ensure existing functionality of an application works appropriately with the added new functionality
- Typically automation tools are used for these types of testing to save time and money

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WOMEN DRESSES T-SHIRTS BRUTEFORCE

Women Tops T-shirts Faded Short Sleeve T-shirts

Faded Short Sleeve T-shirts

Model shohag

Condition New

Faded short sleeve t-shirt with high neckline. Soft and stretch material for a comfortable fit. Accessorize with a straw hat and you're ready for summer!

287 Items **In stock**

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☐ Print

View larger

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Search

WOMEN DRESSES T-SHIRTS BRUTEFORCE

Women Tops T-shirts Faded Short Sleeve T-shirts

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287 Items **In stock**

☐ Send to a friend

☐ Print

View larger

# User Acceptance Testing



UAT testing is a black box type of testing to test the functionality and usability of the application rather than the technical aspects.

UAT testing is usually conducted by user after QA testing is completed.



# Performance / Load Test



Performance or load test is the process of determining the response time of an application /software under specific load. Testing is conducted to check whether system meets performance requirements.





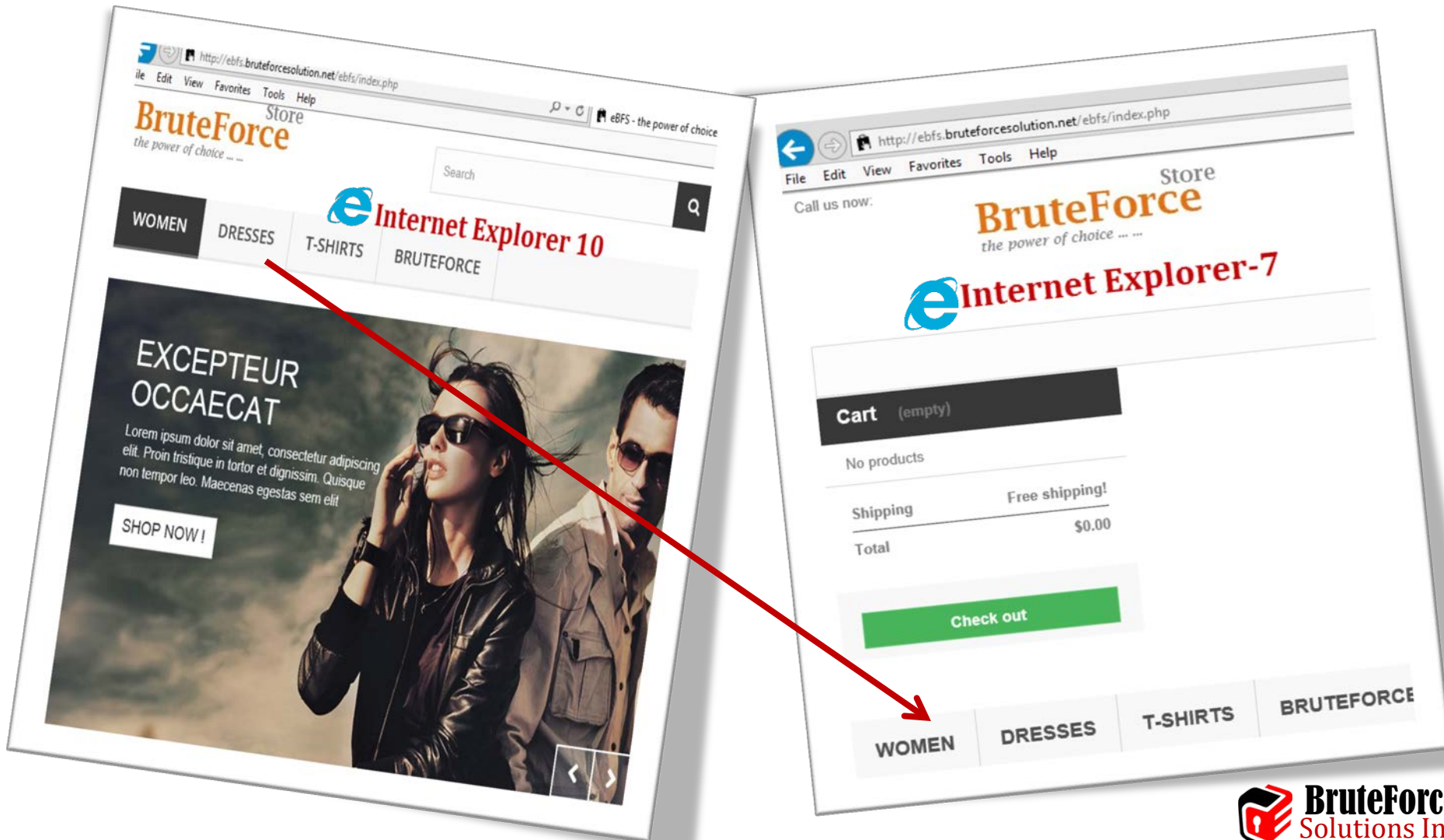
Stress testing is normally conducted to understand how the system perform under heavy load. This kind of test is done to determine the system's strength under extreme load and also helps infrastructure team to determine if the system will perform sufficiently when current load goes well above.



# Compatibility Test



Compatibility testing is performed to validate how application's functionality behave in different platform (different OS, browser and combination of both)



# Testing Type



**Black Box**

**White Box**

**Unit Testing**

**GUI Testing**

**Integration Testing**

**Functional Testing**

**System Testing**

**End to End Testing**

**Smoke Testing**

**Regression Testing**

**User Acceptance Testing**

**Ad hoc Testing**

**Stress Testing**

**Performance Testing**

**Compatibility Testing**

**Failover Testing**







# Summary of Key Concept



- There are two types of testing. Frontend and Backend Testing.
- Black box testing also known as functional testing without knowing the internal logic or structure. For Example User is able to add item to cart.
- White box testing is performed to validate internal code structure.
- Unit Testing to validate code.
- Unit Testing Typically done by programmer and not by tester, as it requires detailed knowledge of programming and coding.
- GUI (Graphical User Interface) testing is perform to validate the functionality of front end interface of the application (radio button, text box, dropdown list etc.)
- Integration testing is perform to validate whether two components/application/modules combined functionally works together.
- Function testing is testing functionality of an application as per the requirements or customer needs and expectations. A requirement specifies a function that a system or component must be able to perform.
- Ad hoc testing is testing the application without planning and documentation (Requirement and Test cases).
- Failover testing is to ensure whether the secondary server works appropriately when primary server fail.



# Summary of Key Concept



- ❏ System testing is the process of testing the entire system. System testing starts after integration of all the components in the application are complete.
- ❏ End to End testing is an application from the beginning to the end which ensures all the functionality works as expected is called end to end testing . End-to-end testing is very similar to system testing.
- ❏ Smoke testing is conducted to ensure whether the most crucial functions of an application are working, but not bothering with details. (also known as build verification).Smoke testing is normal health check up to a build of an application before taking it to testing in depth.
- ❏ Regression testing is the process of testing to ensure existing functionality of an application works appropriately with the added new functionality. Typically automation tools are used for these types of testing to save time and money.
- ❏ UAT testing is a black box type of testing to test the functionality and usability of the application rather than the technical aspects. UAT testing is usually conducted by user after QA testing is completed.
- ❏ Performance or load test is the process of determining the response time of an application /software under specific load. Testing is conducted to check whether system meets performance requirements.



# Summary of Key Concept



- 📌 Stress testing is normally conducted to understand how the system performs under heavy load. This kind of test is done to determine the system's strength under extreme load and also helps the infrastructure team to determine if the system will perform sufficiently when current load goes well above.
- 📌 Compatibility testing is performed to validate how an application's functionality behaves in different platforms (different OS, browser, and combination of both).
- 📌 Compatibility testing requires individual machines where different types of browsers and OS are present. (ex: Testing an application on Win XP + IE8 and testing the same application on Win XP + IE9)
- 📌 Performance, Load, Stress test is performed by a QA Automation Engineer using automation tools. (ex: LoadRunner, Jmeter, Apache Bench).
- 📌 Once QA receives the build from development, the first thing a QA Analyst performs is a smoke test to verify the build.
- 📌 For newly added functionality in an application, a QA analyst selects test cases to run regression tests along with functional tests to make sure existing functionality is not broken because of the added functionality.
- 📌 Usually performance testing starts after functional testing is complete.

- ❏ What is Regression testing? Please explain with example?
- ❏ What is Integration testing? Explain with example.
- ❏ How do you select test cases for Regression Suite?
- ❏ What is the difference between black box testing & white box testing?
- ❏ What is End to End testing? Have you ever performed system testing?
- ❏ What is Ad-hoc/Exploratory testing? In which situation Ad-Hoc/Exploratory testing is useful?
- ❏ What is the Goal of Fail over Testing?
- ❏ What is UAT testing? Who perform UAT testing?
- ❏ What is performance testing? When performance testing is required?
- ❏ What is compatibility testing? How do you do compatibility testing?
- ❏ Have you perform backend testing? What type of backend testing you have performed.

