

E-Commerce ~ Week 3

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Today we'll cover...

- Server-side coding
- Database information for e-commerce
- Begin group project
- Web automation
- Web security
 - Secure transactions
- Credit card processing
- Other solutions



We'll answer the questions...

- How do you make a secure transaction?
- How do you build shipping expense into an e-commerce process?
- How do you link your product information (pricing) to your Web site?
- How do you build a shopping cart?
- Securing Web sites from hackers.
- Are there any sites that manage transactions – so it goes into your accounting records?
- How does security work – from the consumer and the provider's side?
 - What level should you have for your browser?
- How do you set up transactions with the bank?
- Are there any sites that manage transactions?
- How does security work?



Class Project



Class Project

- Working business name
- What you we sell?
 - Shipped product, service, download, other
- Online only, or brick and mortar too?
- Outline technical questions that need to be answered

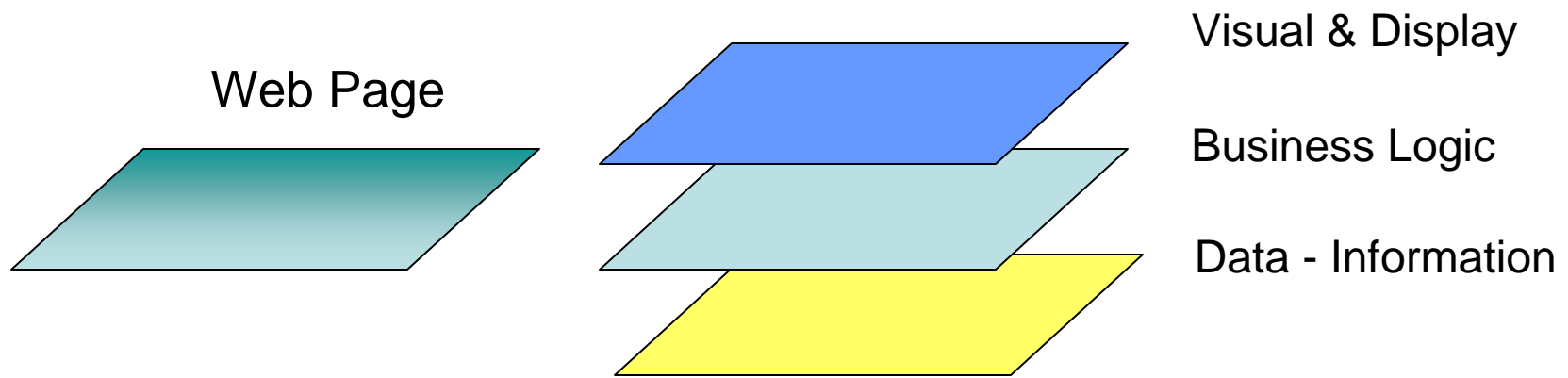


Server-side Coding

What's making everything work



Web Page Structure



Server-side coding

- Connect Web files to data
- Many kinds
 - PHP, ASP.NET, ASP (phasing-out), Java, ColdFusion, Ruby on Rails
 - .asp, .aspx, .php, .cfm, .jsp



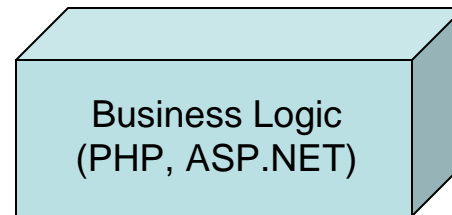
Data Information Request



Web Browser



Server



Data Base



Server-side coding

- Uses variables – remember algebra?
- Variables live in scope
- This is where the big expense lies!
 - Or the big bucks if you are a developer.



Team Project

Outline an online business plan



Data and Databases

What do we need to capture
and where to put it?



Databases

- Data can be stored in many places
 - And in many formats (SQL, MS Access, etc.)
- Database field types
 - Text
 - Numbers
 - Dates
 - Auto-numbers
 - Primary and foreign keys



Databases

- *Question:* What fields do we need for server-side coding?



Web Automation

**Communicating with customers
in absentia**



Web Automation

- Automatically sends information to the user
- Used for transactions
- Used for accounts
- Used for recommendations
- Takes a lot of the work out of things



Web Security

Keeping it safe



Web Security

- **Encryption**
 - To encode or encipher information
- **Key**
 - Reads or "decrypts" encrypted information



Encryption

	1	2	3	4	5
1	A	B	C	D	E
2	F	G	H	I/J	K
3	L	M	N	O	P
4	Q	R	S	T	U
5	V	W	X	Y	Z



Encryption

42 11 23 34 53 11 24 44 11

	1	2	3	4	5
1	A	B	C	D	E
2	F	G	H	I/J	K
3	L	M	N	O	P
4	Q	R	S	T	U
5	V	W	X	Y	Z



Encryption

I AM SPARTA

42 11 23 34 53 11 24 44 11

	1	2	3	4	5
1	A	B	C	D	E
2	F	G	H	I/J	K
3	L	M	N	O	P
4	Q	R	S	T	U
5	V	W	X	Y	Z



Encryption

Message

I AM SPARTA

Encrypted Message

42 11 23 34 53 11 24 44 11

Key

	1	2	3	4	5
1	A	B	C	D	E
2	F	G	H	I/J	K
3	L	M	N	O	P
4	Q	R	S	T	U
5	V	W	X	Y	Z



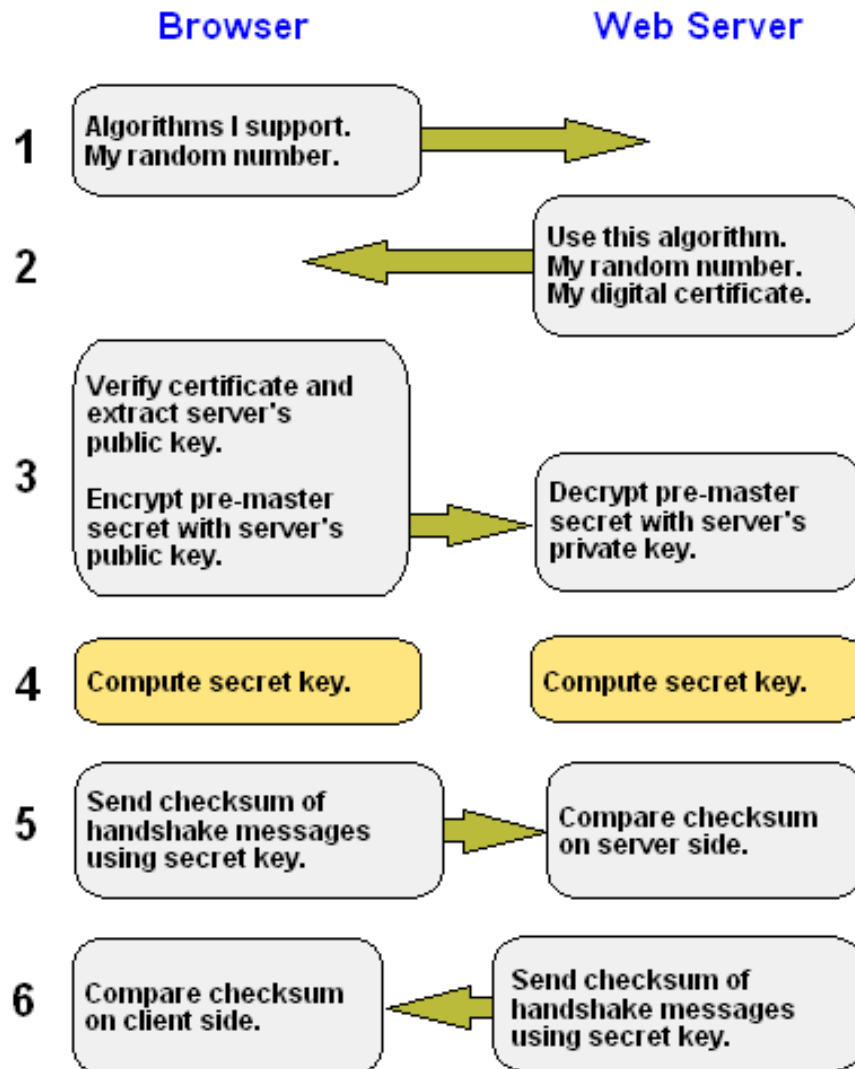
Web Security

Uses prime numbers

- Only divisible by one and itself
- **Data Encryption Standard**
 - 56-bit encryption from 1970
 - 70, quadrillion combinations
 - No longer considered secure
- **128-bit encryption most secure**
 - 300,000,000,000,000,000,000,000,000,000,000,000
 - That's 300 nonillion combinations!



How it happens



- The handshake
- Just the first step
- Needs authentication
 - The user is how they say the are!
- Secure connection?

