

E-Commerce ~ Week 3

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Last week we...

- Created a Web page
- Added a link
- Added an image
 - Discussed Image legality
- Variables & server-side coding
- Databases and how they are connected



Today we'll cover...

- Database information for e-commerce
- Begin group project
- Web automation
- Web security
 - Secure transactions
- Credit card processing



We'll answer the questions...

- How do you make a secure transaction?
- How do you build a shopping cart?
- How do you set up transactions with the bank?
- Are there any sites that manage transactions?
- How does security work?



Team Project

Outline an online business plan



Team Project

- Determine teams
- Pick a user's folder
- Use Microsoft Word
 - Any format is good
- Choose
 - Who will write
 - Who will report
- Remember!
 - Not graded!
 - Won't turn in



Team Project

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



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



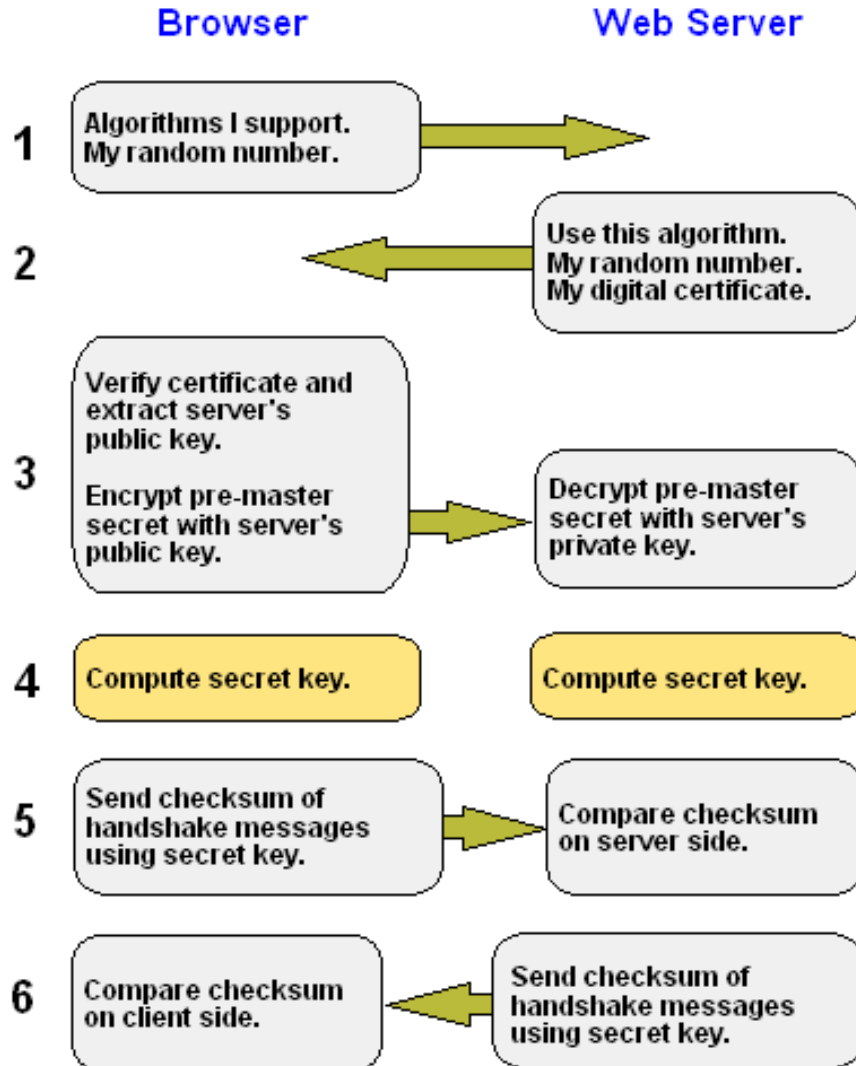
Web Security

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?



Credit Card Processing

How it works



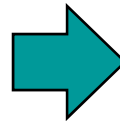
Web Site

Payment Info



Transaction Info

Gateway Provider
PayFlow, LinkPoint



Merchant Account

Payment Info



Approved, Denied, or Error

Front End Network
PaymentTech, FirstData



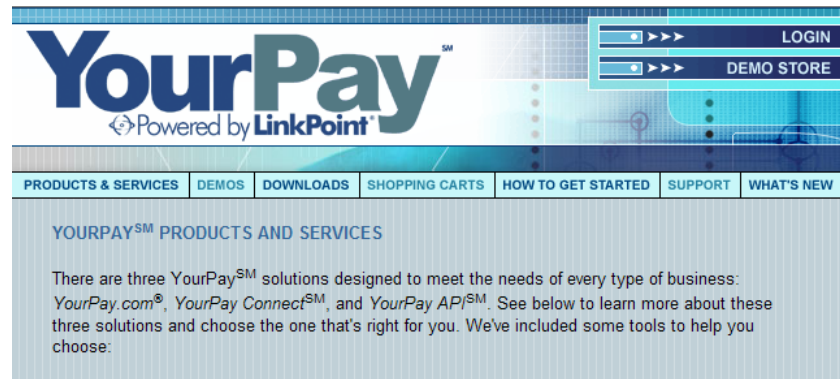
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Your Bank



Credit Card Processing

- Some banks offer full solution



- Other providers also offer full solutions
 - PayPal's Website Payments Pro



Solutions

You don't have to reinvent the
wheel – unless you want to



Solutions

- "Pre-built" solutions
 - Offer Web site creation
 - Uses simple interface
 - Monthly charge, plus set-up, some percentage
- Examples
 - [Yahoo! Stores](#)
 - [eBay Stores](#)
 - Web hosting companies



Solutions

- **Affiliate/Reseller programs**
 - Sell your products, or the company's
 - Receive money based on sales
 - Monthly, plus setup fee
- **Examples**
 - [Amazon.com](#)
 - [Barnes & Noble](#)
 - [Alibris](#)



Other Solutions

- Online Marketers
 - Sell on your blog or Web site
 - Easy, but takes a little studying
- Examples
 - [Café Press](#)
 - [Etsy.com](#)



Solutions

- Fully-fledged shopping carts
 - Take technical knowledge
 - Fully customizable
 - Expandable
- Examples
 - [PayPal's Website Payments Pro](#)
 - [ASPDotNetStorefront](#)



Question

**What overhead exists for
e-commerce Web sites?**

