

# Paperless Ideas for Abrasive-Form

As presented by:

I PRO 347



# Introduction

## ***IPRO 347***

The purpose of this IPRO is to make Abrasive-Form a better company by saving space, time, and **money**



# Team Ethics

- ❖ The team's Ethics Plan stresses respecting the non-disclosure agreement with Abrasive-Form®
- ❖ Disclosing information about Abrasive-Form® could cause the team to acquire biased information



# Project Team Members

❖ **Instructor:** *William Maurer*

❖ **Sponsor:** Abrasive-Form, Bloomingdale, IL

**Company Representative:** Greg Zilinisky

❖ **Team:** Vitali Basiourski [ME], Christopher Drag [EE], Samad Erogbogbo [ME], Richard Ike [ME], Maciej Krolikowski [BME], Daniel Mendez [EE], Erin Mersch [BAAS], Anton Orlichenko [CPE], Justin Roediger [BME], and Despina Zouridis [ARCH], William Cabrera [ME],.



# Abrasive-Form

❖ **Established** in 1976, Abrasive-Form is a rapidly growing contract manufacturer specializing in creep-feed grinding.

❖ **Proven Performance** Abrasive-Form's satisfied customers includes hundreds of distinguished companies spanning the spectrum of American Industry.

❖ **Expert Technical Help** Abrasive-Form's grinding experts can assist with design and process specifications.



# The Problem

## ***IPRO 347***

Abrasive-Form, a growing 21<sup>st</sup> century company  
using data management comparable to an  
abacus





# Team Organization

## ❖ *Quality Control*

- Vitali Basiourski
- William Cabrera

## ❖ *Operations*

- Christopher Drag
- Daniel Mendez

## ❖ *Accounting*

- Samad Erogbogbo
- Richard Ike

## ❖ *Purchasing/Shipping*

- Maciej Krolikowski
- Justin Roediger
- Despina Zouridis

## ❖ *IT Dept.*

- Erin Mersch
- Anton Orlichenko



# Abrasive-Form Needs

- ❖ Replace current physical document storage system
  - Real time updating
  - Simple and easy to use
    - Administrator and user control
    - Search Engine
      - Several searchable criterion
    - Has sub-folders
    - Time stamps
    - Comment logs
  - Off-site backup



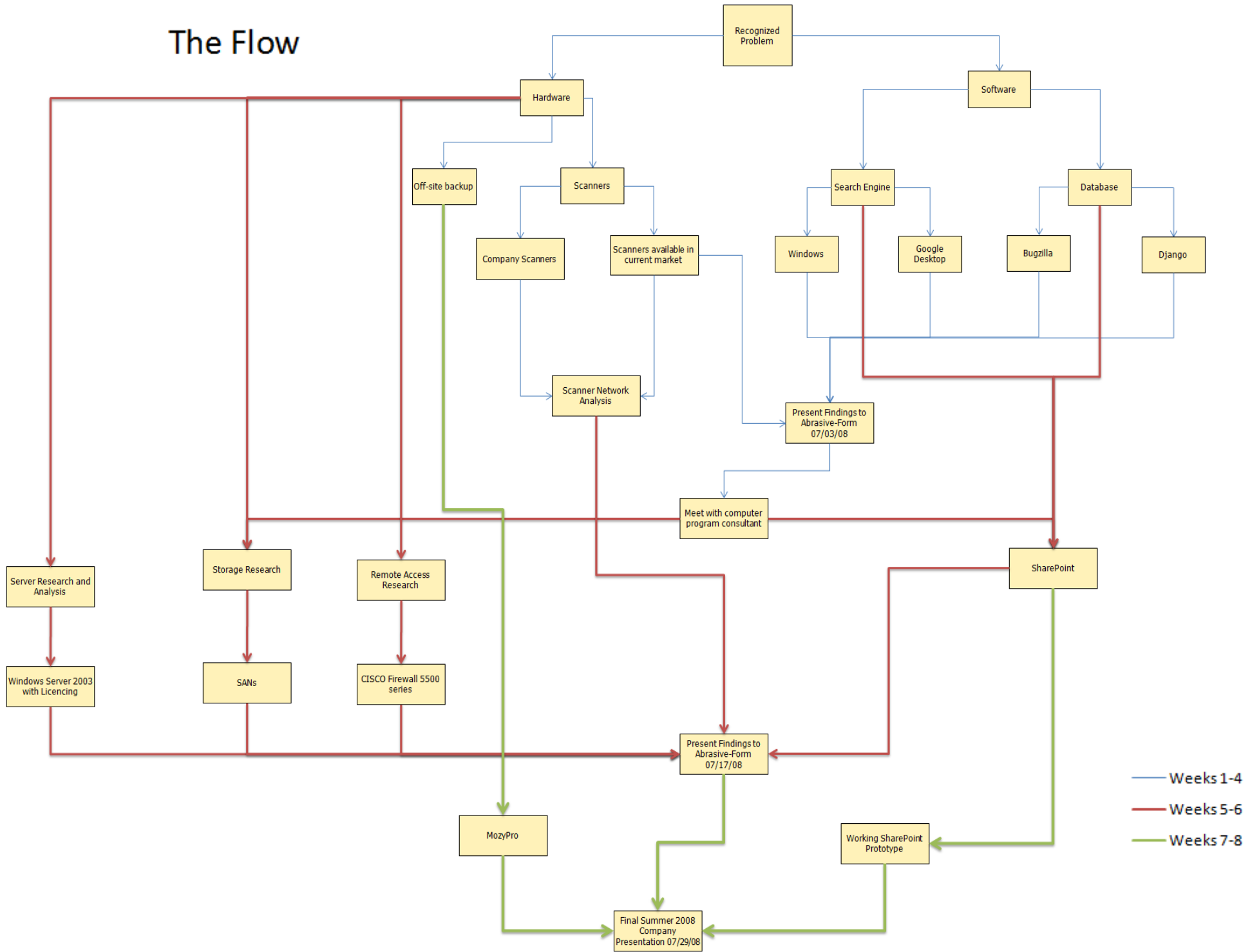


# Abrasive-Form Wants

- ❖ E-mail alerts/alarms
- ❖ Remote Access
- ❖ Bar coded files
- ❖ Write to electronic documents
- ❖ Integrate data from CMM in database
- ❖ Export from Vista to database



# The Flow



# Team Re-organization

## ❖ *Systems*

- Vitali Basiourski
- Samad Erogbogbo
- Richard Ike
- Erin Mersch
- Anton Orlichenko

## ❖ *Information*

- Christopher Drag
- Daniel Mendez
- William Cabrera
- Maciej Krolkowski
- Justin Roediger
- Despina Zouridis



# Goal

Create an easy-to-use, windows server based, content management system



# System Testing

## ❖ Possible Solutions for electronic filing:

- Windows Search
- Google Desktop
- Bugzilla
- Django
- SharePoint



# Windows Search

## ❖ Pros:

- Pre-installed on the computer – no purchasing/downloading necessary
- Can be limited to a folder

## ❖ Cons:

- Difficult to integrate with browser-based applications





# Google Desktop

## ❖ Pros:

- Simple interface
- Searches within .pdf files
- Sorts by date

## ❖ Cons:

- Only for searching capabilities
- Searches the entire computer, not just a particular job folder
  - Possible confusion



# desktop.google.com



[Web](#) [Images](#) [Video](#) [News](#) [Maps](#) [Desktop](#) [more »](#)

Search








[Desktop Preferences](#)  
[Advanced Search](#)

## Index Status

One-time index update in progress.

16.2% complete with about 4.8 idle hours left. 3,184 item(s) indexed so far.



	<i>Number of items</i>	<i>Time of newest item</i>
 <b>Total searchable items</b>	<b>3,184</b>	<b>0:17</b>
 Gmail	0	-
 Emails	0	-
 Web history	0	-
 Files	2,119	0:17
 Media	959	0:15
 Other	106	07/02/2008

Search



# Bugzilla

## ❖ Pros:

- Allows you to make comments on each folder and search within the comments
- Allows search by job folder number

## ❖ Cons:

- Not a complete content management system
  - Needs Perl coding language installed



# www.bugzilla.org

Bugzilla

[Bugzilla](#) Version 2.22.1-debian2

## Bug List

Bugs on this list are sorted by relevance, with the most relevant bugs at the top.

Wed Jul 2 2008 22:18:22 CST

*Bugzilla would like to put a random quip here, but no one has entered any.*

ID	Sev	Pri	OS	Assignee	Status	Resolution	Summary
<a href="#">1</a>	blo	P2	Linu	<a href="mailto:aorliche@gmail.com">aorliche@gmail.com</a>	NEW		Job 23346

One bug found.

Long Format

[CSV](#) | [Feed](#) | [iCalendar](#) |  
[Change Columns](#) |

[Edit Search](#)

Remember search as

XML

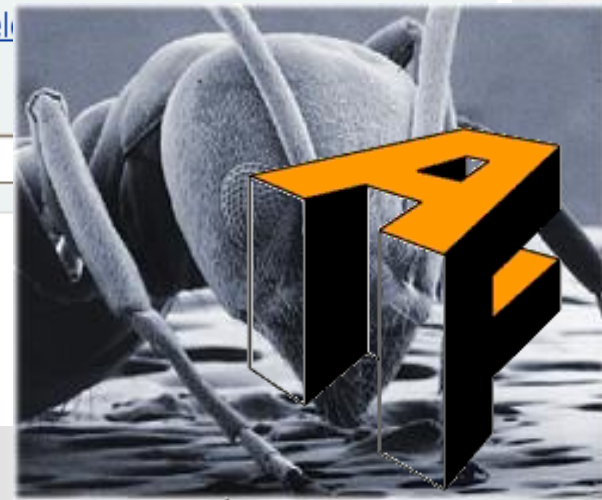
Actions: [Home](#) | [New](#) | [Search](#) |   | [Reports](#) | [My Requests](#) | [My Votes](#) |

[Sanity check](#) | [Log out](#) [aorliche@gmail.com](mailto:aorliche@gmail.com)

Edit: [Prefs](#) | [Parameters](#) | [User Preferences](#) | [Users](#) | [Products](#) | [Flags](#) | [Fields](#) | [Keywords](#) | [Whining](#)

Saved Searches: [My Bugs](#)

bugs  to the new saved search:



# Django

## ❖ Pros:

- Framework for building a content management system
- Fully customizable
- Easily linked to Databases and File Servers
- Pre-made admin. pages

## ❖ Cons:

- Takes longer to implement, further development would be required
- Extra coding is necessary to customize

## ❖ Python language required







### Site administration

Auth		
Groups	<a href="#">+ Add</a>	<a href="#">Change</a>
Users	<a href="#">+ Add</a>	<a href="#">Change</a>
Sites		
Sites	<a href="#">+ Add</a>	<a href="#">Change</a>
Jobman		
Customers	<a href="#">+ Add</a>	<a href="#">Change</a>
Document comments	<a href="#">+ Add</a>	<a href="#">Change</a>
Document types	<a href="#">+ Add</a>	<a href="#">Change</a>
Document versions	<a href="#">+ Add</a>	<a href="#">Change</a>
Documents	<a href="#">+ Add</a>	<a href="#">Change</a>
Job comments	<a href="#">+ Add</a>	<a href="#">Change</a>
Jobs	<a href="#">+ Add</a>	<a href="#">Change</a>

### Recent Actions

#### My Actions

- ~~RE: Packing slip (Job #23346, Shipping) And we can also make comments at the level of indi...~~  
Document comment
- + RE: Packing slip (Job #23346, Shipping) And we can also make comments at the level of indi...  
Document comment
- ~~RE: Job #23346 We can make comments about jobs...~~  
Job comment
- + RE: Job #23346 We can make comments about jobs...  
Job comment
- + Packing slip (Job #23346, Shipping) v. 1  
Document version
- + Packing slip (Job #23346, Shipping)  
Document
- + Shipping  
Document type
- + 23346  
Job
- + Goodrich Corporation  
Customer

washingtonpost.com

www.djangosites.org





# SharePoint

## ❖ Pros

- Comes with most Windows servers
- Easy to use
  - Easy to configure
  - Actual use requires little training
- Powerful engine
  - Version tracking to record the history of documents
  - Searchable information to identify a document
  - Document publishing control, including publishing to specific audiences
  - Document approval routing

## ❖ Cons

- Extra firewall is necessary for remote access
- Must have Windows Server 2003



# SharePoint

The screenshot shows a web browser window with the address bar containing `http://moss.stmarkchicago.org/sites/Abrasive/default.aspx`. The browser's address bar includes navigation buttons and a search box with the text "Google". Below the address bar is a bookmarks bar with entries like "Nobby Bookmarks", "hltsummer2009", "Google", "Apple (87)", "Yahoo!", "Amazon", "eBay", and "News (1333)". The browser's tab bar shows several open tabs, including "JList (Java 2 Platf...", "How to Use BoxL...", "BorderLayout (Ja...", "Gmail - Sharepoi...", "Travian com3", "YouTube - Syste...", and "Home - Abrasive".

The main content area of the browser displays the SharePoint site "Abrasive". The page header includes the site name "Abrasive" and a welcome message "Welcome Anton Orlichenko". There are navigation links for "My Site" and "My Links". A search box is present with the text "This Site: Abrasive".

The left sidebar contains a navigation menu with the following items:

- Home
- View All Site Content
- Documents
  - Job Documents
- Lists
  - Customers
  - Jobs
- Discussions
- Sites
- People and Groups
- Recycle Bin

The main content area displays a "Jobs" list. The list has a header with "New", "Actions", and "Settings" menus. The list contains the following data:

ID	Title	Customer	Job #	Date parts received	Date opened	Date due	Date completed
	Turbine Component Services	Goodrich Corporation	23223	6/9/2008			
	Shroud, https	General Electric	18033	5/8/2006		12/31/2008	

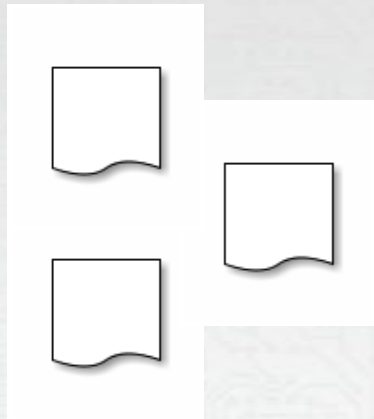
The Microsoft Windows SharePoint Services logo is visible in the bottom right corner of the main content area.

# Data Input



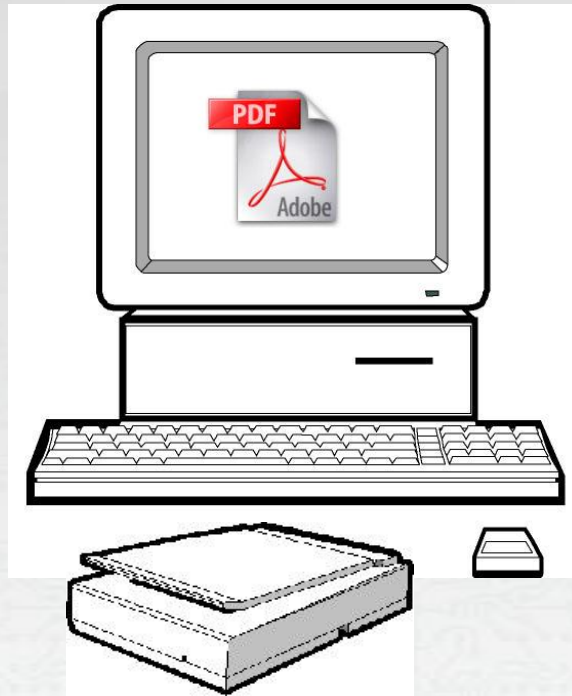
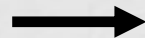
## Job Folder

Contains many documents



## Documents

- Job traveller
- Shipping
- Purchasing
- Inspection Sheets



## Scanner/Workstation

Librarian converts docs to PDF format

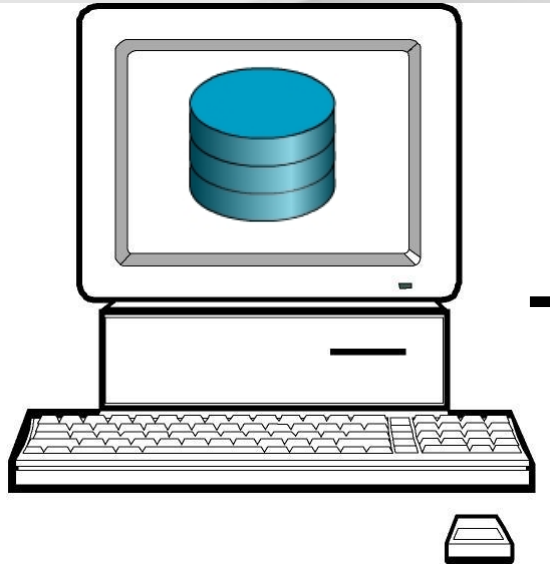


## SharePoint Server

Digitized docs are sent over the company network to a central server

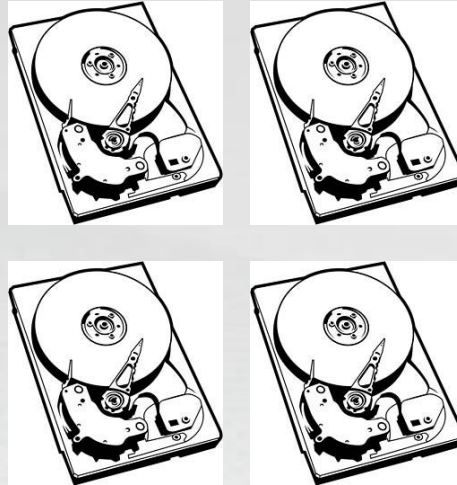


# Storage



## SharePoint + SQL

SharePoint server uses SQL to write and retrieve data



## Storage Area Network

Documents stored locally on the server. More space available with SANs.



## Offsite Backup

Electronic job docs may be backed up online



# Data Retrieval



## SharePoint Server

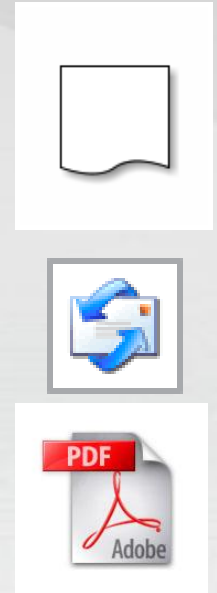
Documents available in electronic job folders, on a website visible to the VPN only



## End User

From SharePoint, employees can:

- Print docs
- Send docs as email
- Annotate docs on the server
- More?





# Obstacles

## ❖ Difficulty Coordinating with Company

- Delays in project progress
- Delays in interviews
- Information of current resources not clear

## ❖ Interviews

- Large amount of information gathered from employee interviews
- Employees more concerned with wants than needs

## ❖ Majority of the team not familiar with programming

- Creating a customized database requires a sizable amount of programming





# Results

- ❖ **Working SharePoint prototype**
  - Easy to use and configure
  - Fulfills search criterion, organization requirements, and customizable
- ❖ **Storage**
  - SANs
- ❖ **Backup**
  - MozyPro
- ❖ **Security and off-site access**
  - CISCO Firewall
- ❖ **Scanner-printer hardware**
  - Several recommendations



# Looking Ahead

- Test functionality of system
- Train employees to use SharePoint
- Implement wants into system
  - Email alerts
  - Bar Codes/RFID
- Keep Abrasive Form HAPPY :]**



# Acknowledgements

- ❖ Greg Zilinsky, Manager of Strategic Programs, Abrasive-Form Inc.
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# Questions

