4 Requirements Engineering

Get ready!

1 Before you read the passage, talk about these questions.

1 What is the purpose of requirements engineering?
2 How are software specifications organized?

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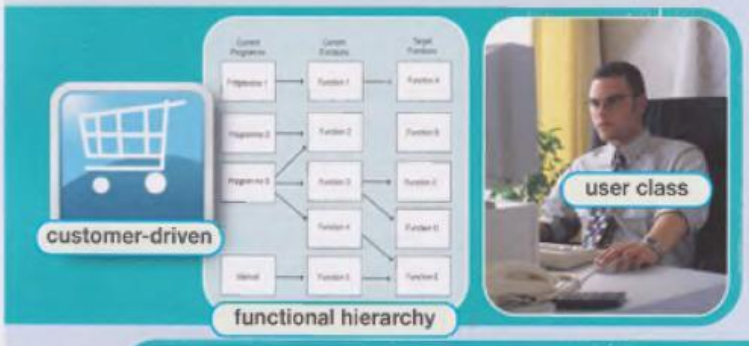
Requirements Engineering Department

We understand that functional and **user-friendly** software comes from well-defined foundations. Therefore, we take great pride in our requirements engineering department. Our engineers perfect every **specification** for the software that we create.

We primarily create **market-driven** software for general consumers. However, we also create some **customer-driven** software for special projects. First, our team makes a detailed requirements document. This is based on **elicitation** of the requirements. Typically, the information comes from people who will likely use the software. Then, a separate team provides **validation** and **verification** for that document. This process prevents mistakes and ensures precision.

We organize requirements by the most appropriate parameters for the software. Specifications can be organized by the **mode**, **user class**, or **response**. In less-common cases, requirements documents are organized by real-life **objects**. Or they might be determined by some other **functional hierarchy**.

One way or another, we'll get the job done. For more information about requirements engineering services, contact our customer service department.





Reading

2 Read the webpage. Then, choose the correct answers.

1 What is the purpose of the webpage?
- **A** to list job qualifications for a requirements engineering position
- **B** to define various requirements engineering concepts
- **C** to review a company's requirements engineering process
- **D** to describe the work experience of several requirements engineers

2 Which of the following is NOT a parameter used to organize requirements?
- **A** user class
- **B** objects
- **C** mode
- **D** verification

3 Why does a second team of engineers provide validation and verification?
- **A** to avoid errors in the requirements document
- **B** to organize requirements specifications
- **C** to ensure elicitation of important information
- **D** to determine the most appropriate functional hierarchy

Vocabulary

3 Match the words and phrases (1-8) with the definitions (A-H).

1 __ customer-driven
2 __ market-driven
3 __ specification
4 __ requirements engineering
5 __ elicitation
6 __ validation
7 __ verification
8 __ user-friendly

- **A** designed in response to specific needs of potential users
- **B** a precise definition of a problem
- **C** designed for broad purposes
- **D** the process of becoming apparent or realized
- **E** the act of checking that requirements are correct
- **F** the act of checking that requirements are stated correctly
- **G** easy for most people to understand or use
- **H** the practice of specifying the necessary features and functions of software

LIVEWORKSHEETS

4 **Write a word or phrase that is similar in meaning to the underlined part.**

1 Some software is defined in terms of its relationship to <u>real life things that can be touched or seen</u>. _ _ j _ c _ s _

2 Software specifications can change depending on the <u>status of the person who is using the software</u>. _ s _ r c _ _ s _

3 If no traditional specifications are appropriate, a requirements document can be organized by <u>any undefined system</u>. _ _ n _ _ i _ _ a _ _ _ e _ _ r _ h _

4 Software that changes according to the way it is used can be defined according to its <u>changeable system of operation</u>. _ _ d e

5 The type of <u>information provided by software upon request</u> is sometimes a specification in requirements documents. _ _ s _ o _ s _

5 **Listen and read the webpage again. How do engineers identify errors in a requirements document?**

Listening

6 **Listen to a conversation between two engineers. Mark the following statements as true (T) or false (F).**

1 __ The engineers recently assessed requirements for a software update.

2 __ The specifications were made with the wrong data.

3 __ The engineers missed an important deadline.

7 **Listen again and complete the conversation.**

Engineer 1: Can you give me an update **1** _____ _____ _____ for the library catalog application?

Engineer 2: It's going slowly. It was good at first, but we found some major problems when we did **2** _____ _____.

Engineer 1: I don't like the sound of that. **3** _____ _____?

Engineer 2: **4** _____ _____ _____ _____ were based on old data. The requirements didn't include the library's new DVD catalog.

Engineer 1: Oh, that's right. Originally, they only included books. Will we able to fix the problem?

Engineer 2: We're **5** _____ _____ _____ now. Then we'll just plug it into the existing requirements document.

Engineer 1: How long will that take?

Engineer 2: We should have it done by the **6** _____ _____ _____ _____.

Speaking

8 **With a partner, act out the roles below based on Task 7. Then, switch roles.**

USE LANGUAGE SUCH AS:

Can you give ...

How long ...

I was worried ...

Student A: You are an engineer. Talk to Student B about:

- a project your company is working on
- problems with the requirements document
- when the project will be completed

Student B: You are an engineer. Talk to Student A about a project your company is working on.

Writing

9 **Use the conversation from Task 8 to complete the project update.**

ShorSoft Software Developers

From the desk of: Allison Baxter

Hi Greg,

Here is an update on the _____ project.

Current stage: _____.

Problems encountered: _____ _____.

Next steps: _____ _____.

Let me know if you have any questions.
-Allison

LIVEWORKSHEETS