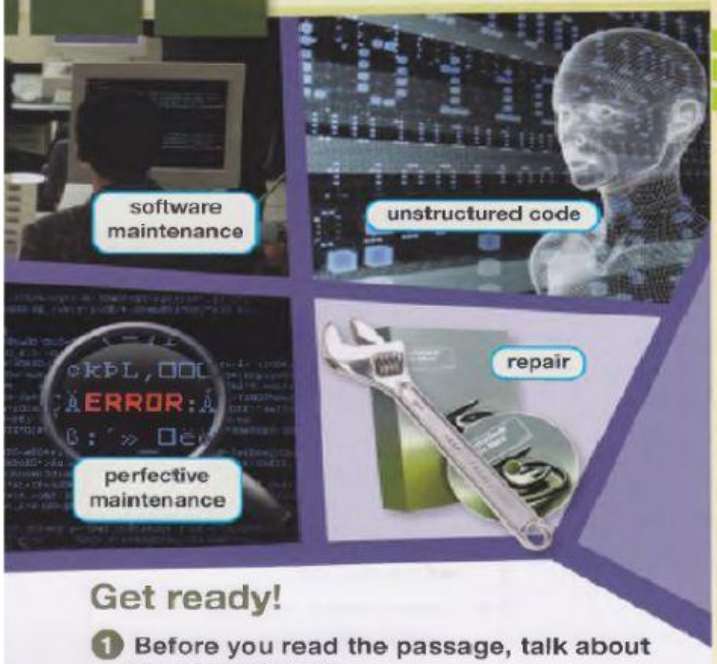
14 Software Maintenance 1



To: All Employees
From: c.bellman@shorsoft.net
Subject: Updated Policies for **Software Maintenance**

Good Morning Employees,

I understand that most departments are practicing **corrective maintenance**. This practice should continue, but I think it is **insufficient**. I believe we need to focus on **adaptive maintenance** as well. According to the **law of continuing change**, this will allow us to grow more rapidly.

Developing new software is important. But to stay competitive, we must **enhance** our existing software, too. New **releases** are the best way to keep customers interested in our products. This will require engineers to practice **perfective maintenance.** Always **repair** problems as soon as they are identified.

However, engineers must also remember the **law of increasing complexity**. If software becomes too complex, it becomes difficult to maintain. Engineers should know when to update and when to write a new program.

Unstructured code will no longer be tolerated. It causes confusion and makes further updates more difficult. Remember, **preventive maintenance** is the strongest software maintenance practice.

-Clinton Bellman
CEO, ShorSoft Corporation

Get ready!

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

1 What are the benefits of software maintenance?
2 What are some different types of software maintenance?

Reading

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

1 What is the purpose of the memo?
- **A** to warn employees about maintenance risks
- **B** to reprimand employees who are not following maintenance procedures
- **C** to show techniques for software maintenance
- **D** to inform employees about new policies

2 Which of the following is NOT something that the CEO wants engineers to do?
- **A** Avoid unstructured code.
- **B** Focus more on corrective maintenance.
- **C** Get existing software ready for new releases.
- **D** Increase preventive maintenance measures.

3 According to the email, how can engineers enhance existing software?
- **A** creating less unstructured code
- **B** using templates from other software programs
- **C** repairing problems in the software
- **D** practicing corrective maintenance

Vocabulary

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

1 __ adaptive maintenance
2 __ corrective maintenance
3 __ law of continuing change
4 __ law of increasing complexity
5 __ perfective maintenance
6 __ preventive maintenance
7 __ software maintenance
8 __ unstructured code

- **A** the practice of accommodating new user requirements
- **B** the practice of repairing software faults
- **C** the format of a system with no clear order
- **D** the practice of making systems easier to maintain
- **E** the process of fixing faults and making improvements in software
- **F** states that a system should undergo modification until it is no longer cost-effective
- **G** the practice of updating software according to changes in environment
- **H** states that a structure becomes more complex with every change

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

1 The attributes of an older system may be unsuitable or not strong enough to work on updated operating systems.
_ _ s _ _ f _ _ _ _ _ t

2 A software engineer should fix any problems he or she finds in a code. _ _ p _ _ r

3 Each new updated version of existing software should come with some modifications.
_ _ / _ a _ _

4 Consumers of software are happy when engineers improve existing components in new versions of software products.
_ n _ _ n c e

5 **Listen and read the memo again. Why does the CEO want engineers to perform adaptive maintenance?**

Listening

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

1 __ The man wants to start with corrective maintenance.

2 __ The engineers are adding new functionality to old software.

3 __ The woman discovered unstructured code in the software.

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

Engineer 1: We have **1** _____ _____ _____ to do on that accounting software.
Engineer 2: Yeah. I'm really **2** _____ _____ _____ all of that work.
Engineer 1: Neither am I. But I think if we make a plan, we can save ourselves a lot of time.
Engineer 2: That's a good idea. **3** _____ , _____ fix all of the problems with the software.
Engineer 1: Okay. We can start with a round **4** _____ _____ _____ , then.
Engineer 2: Exactly. Next, we need to **5** _____ _____ all of the code.
Engineer 1: Why do we need to do that?
Engineer 2: So that it can **6** _____ _____