III

------IT

IT

1.1

a.

- programming language
- application requirement
- interface
- spec
- develop
- code

b.

Mr. B: There are many programming languages in the world.

Mr. A: Yeah, but the programming principle is common across all those different languages.

Mr. B: What do you mean?

Mr. A: OK. Let me explain the application development process. At first, you have a requirement, which is called an application requirement. You survey users` requirements at first.

Mr. B: That is important if you want your application to meet your customers` requirements.

Mr. A: Next, you decide the external factor, in other words, the interface. Then, you design the internal factors that materialize the interface. Lastly, you determine the function of a program unit.

Mr. B: You design the function of a program from outside to inside.

Mr. A: Right. Now, you have a program spec in your hand. It becomes particularly paramount to document program specs when you manage a large project.

Mr. B: What would you do after you finished documenting the spec?

Mr. A: Next, you are going to develop and test the program.

Mr. B: Do you also have specific processes?

Mr. A: In detail, program development can be divided into coding and development, but what counts most is actual coding.

Mr. B: What about test?

Mr. A: You can not list all types of tests here. ……

Mr. B: You do have many tests, don`t you?

Mr. A: You have to test your program immediately after you pass a trial test
at the time of employment.

1.2
- design a program
- write a program
- test a program
- set up the variables
- use the variables
- generate a key record
- initialize the object
- update the data
- verify the data
- compile the program
- start the program
- stop the program (terminate, exit, close, kill)

1.3
- append one string to another
- compile A to B
- get compile errors
- work on a few finishing touches
- turn into garbage characters
- harness this functionality
- I got stuck here.
- increment, decrement
     This value is incremented by one for each loop.
- Initialize the variable
- Pass the value
- Return the value
- Push the structure on the stack, pop all elements off the stack
- Steer clear of overflow problems (   )
- Track down a problem (   )

2.1

a.

- It`s brand-new
- It was for sale
- Turn on(off)
- It might take you forever
- Shut down
-

b.

A: Congratulation! I heard you bought your own computer. Can I see it?

B: I`am glad you're here. I don`t know what to do. Can you teach me how to use it?

A: Yes. Cool. It`s brand-new.

B: It was for sale.

A: Where can I start?

B: Actually, I don`t know how to turn it on. Which is the on/off switch?

A: Are you kidding me? You've never touched a computer? It might take you forever.

B: Don`t say that. Please teach me.

A: I was just kidding.

A: OK. Let`s start with how to turn on the computer.

B: Yes.

A: There are some buttons. This is the switch.

B: I see.

A: Now, why don`t you turn it on?

B: OK.

A: You wait until the OS is up. It should take about two minutes.

(After two minutes)

A: OK. Now, it`s up and ready. Now, where shall we start? By the way, what did you buy the computer for?

B: Well, the Internet, E-mail, and word processing.

A: OK. Let`s start with the word processing.

A: OK. Let`s shut down the computer.

B: Just turn off the computer?

A: No way. Some users always turn off the computer before they shut it down. Something might go wrong. Never ever do it that. OK?

B: OK.

A: Listen. Click Start—Shutdown. It automatically turns off the computer, too.

B: That`s even better.

2.2
- input unit
- key board
- mouse

- output unit
- speaker

- display unit
- monitor

- memory unit
- main memory unit
- read-only memory
- random-access memory

- external storage unit
- hard drive
- floppy drive

- processing unit

- central processing unit
- motherboard

- peripheral unit
- printer
- scanner
- modem

- point the cursor to ~
- click the button
- hit the key
- type ~
- Press *1* key while holding down the Shift key.
- Scroll up the page

2.3
- Does this database run on a UNIX **box** or a NT **box**? (box:)
- Mount the new hard drive by **screw**ing the four **screw**s.
- What Hz does this machine **run** at?
- How much memory does this machine **have**?
- Pentium III 1GHz is **faster** than AMD Duron 1GHz.
- Tech support people are supposed to **diagnose** problems of your computer anytime.
- Would you **send me someone** who could help me set it up?
- I need more **outlets** for my peripherals I brought. (outlet:)
- This monitor is not as **crisp** as an old one I had. (crisp:)
- This monitor **flicker**s badly. (flicker:)

OS

3.1

a.

- move
- select
- click
- double-click
- hit a key
- remove the diskette

b.

B: How can I start the program?

A: You can double-click the program icon.

B: Which icon?

A: Where are you? You can`t find it on your desktop?

B: What kind of shape?

A: Well then, point the cursor to the Start button at the bottom left of the screen.

B: Then, what?

A: Point to Program, and you see the program list.

B: OK.

A: Next, you choose the xyz. Don't choose other selections like Readme or Help.

B: I see.

A: Were you able to start the program?

B: Yes. Now, I see the top screen.

A: Let`s close the word processing program.

B: Should I remove the diskette?

A: No. You can remove it after you turn off the computer.

B: Before I forget, I'll remove it now.

A: Let`s close it. There are two ways. One is to click the X button at the top right of the application screen. The other way is to click File—Close.

B: Click X, and I can save some time.

3.2
- edit a file
- Undo the file edit
- Find xyz
- delete the record
- clear the message
- empty the trash
- select one of the following buttons
- The program will display a new menu.
- You will see a new menu.
- Insert date
- Page break (   )
- Format=clear the date + initialize
- Font = font type + font size + font style

3.3
- I am heavy in games.
- The restoration of the whole system is very time-consuming
- You need to apply this patch to all workstations affected by the vious.
- Could you print this out with a paper orientation of Landscape(portrait)?
- exit out
- After you open the option window, locate the section called " Display Fonts".
- Switch back and forth
- Click the Start button and point to Programs.
- Hold your pointer over the icon.
- Hold down the key
- Bells and whistles

4.1

a.

- Good guess.
- You are supposed to click the left mouse button
- Save the file as
- Become virus-infected
- It must be
- Drag and drop
- Release the button

b.

A: Let`s create the file.

B: What`s a file?

A: A computer is often compared to a desk. You create a file to save all newly created data when you start a new task. Let`s start from there.

B: I`ve heard of it. They call it what you just explained.

A: Now, you see File, Edit at the top of the screen. This is called the "Main menu". You select one that you want form this menu. Guess which menu you select when you want to create a new file.

B: Well, you select File.

A: Good guess. Point the cursor to the File menu, and click it.

B: There two buttons on the mouse. Which button should I click?

A: You are supposed to click the left mouse button. You click the right mouse button when you want to display another menu.

B: OK. Additional menus are displayed.

A: They are called sub-menus under the Main menu. You see Create a New File. Can you click that?

B: I see another screen.

A: Click the OK button.

B: I did.

A: You write whatever you want. Suppose you are finished writing. Now, let`s

save the file as xyz.

B: I saw Save As. Is that what you're talking about?

A: You are right. Click it, and you will see another screen in which you enter your file name, file type, and directory you save in.

A: Let`s close the word processing program.

B: Before that, can you teach me how to back up the file?

A: Backing up your file is very important. You never know what will happen. Something might go wrong all of a sudden; it might be virus-infected. You might spill the beer.

B: Can I back up the file onto the diskette?

A: Yes. Then, why don`t you insert the diskette into the diskette drive.

B: Like this?

A: Yes. There are several ways. Double-click My Computer on the desktop, and open the folder in which you just saved your file.

B: I`m not going to use the word processing program?

A: You can use it. But I think it`s convenient when you know how to copy and move your file.

B: Did I save it in the C drive or D?

A: It must be in the D drive.

B: You are right.

A: You may want save program files in your C drive, and user files in D when you have more than one drive.
   When you open the folder, you see the file. Click the file with the left mouse button and hold it. Drag and Drop the file in the A drive. You release the button.

B: Like this?

A: Good job. You create the backup file in the A drive. Now, you can spill the beer.

4.2
- update database
- compress database
- replace database
- search a record in database

- **control data**
- **application data**
- **What is the advantage of a relational database over a hierarchical one?**
- **You can narrow the number of records by keyword search.**
- **You can identify the one and only record with a unique key.**

4.3
- nuke the data

  He must have run a wrong SQL statement. We need to nuke all the data!
- **globally change**
- **You need to execute a SQL statement to obtain all the user names.**
- **The program retrieves the resource data from the database in run-time.**
- **Chock up**

  Everything should be fine for the test environment. But the database would choke up if you tried to use the system in production.
- **The program must keep these fields` data in sync.**
- **Cripple**

  Sending a few thousands byte data could cripple the server.

5.1

a.
- are familiar with
- subscribe to
- allow you to do
- keep phone busy
- manually
- Let`s move on to
- So much for
- You are lost
- Wait a sec.

b.

A: Now, you are familiar with how to use the word processing program. Next, let`s connect to the Internet.

B: Finally, I will be able to surf the Internet.

A: In order to connect to the Internet, you have to subscribe to an Internet Service Provider. There are three ways. Firstly, telephone line connection. Second, ISDN. Finally, broadband connection.

A: Now, you are connected. ADSL connection allows you to connect to the Internet and check e-mail instantly. That does not keep your phone line busy when you are online.

B: That does not keep my cell phone busy either?

A: Of course, not.

A: Let`s surf the Internet.

B: I know that I start the browser.

A: You`re right. How come you know it?

B: I used the browser at the school library once.

A: There is nothing to teach you.

B: Not really. I don`t know how to search for the information effectively. I

can`t find it easily.

A: OK. I will teach you how to use the search engines.

B: I start the browser.

A: Browsers are varied, but the most popular ones are Netscapre from Netscape, Inc. and Internet Explorer developed by Microsoft. You have IE.

B: Can you change the first home page that is displayed when IE starts?

A: Yes, you can. Click Tool, Internet option, and you will see several tabs. Enter your favorite URL in the first box, and HP will be displayed.

B: Let me enter Asahi.com, because I want to check the current news.

A: You can enter www.asahi.com manually in the box. You can also go to Asahi.com and check the box. It`s already in there.

B: Great! I save my time.

A: Let`s move on to the search engine. We`re going to use Google, which is widely used by the Internet users. It provides high search efficiency and fast response.

B: I used Yahoo! Japan at school. Any difference?

A: Google is called a robot search engine. Yahoo! Is a category search engine. Google searchs for your keywords in different home pages and displays only those home pages that contain your keywords in their body. Yahoo! Only display categories they registered in their directory system.

B: Google read all the information, and still provides high search efficiency.

A: Google uses its unique algorithm, which is a calculation method.
   So much for orientation. Let`s start the search.

B: Let me start he browser. How can I go to Google?

A: The fastest way to get to a homepage is to enter its URL manually in the address box at the top of the browser.

B: What should I do if I don`t know the URL?

A: You are already lost? You need to know the address of any search engines before you start searching. An original search engine software may be installed in some computers. But you may want to know the URL of those popular search engines like Google and Yahoo! Japan. The URL is www.google.com.

B: w…w…w… Hit the Enter key! OK. We are here. Google uses a very simple

design.

A: You never get tired of simple design.

B: The one who last laugh is the one with low techlonogy?

A: I did not mean it.

B: I can do it. Enter the keyword. What keyword?

A: Wait a sec. The purpose of your search is much more important than search techniques. Make sure you have a specific purpose, and start searching.

5.2
- download, upload
- access the web site
- access denied
- authorization
- authentication
- identification
- identifier
- This printer is connected to the network.

5.3
- Somebody was trying to hack my web site last night.
- When I measured the throughput, I got 5Mbps.
- Incoming, outgoing
    I need a software tool to analyze the incoming traffic.
- Can you share the folder so I can get access to it form my machine?
- I have configured the IP address to 128.91.63.41.
- Dynamic, static
- Hook up
    What type of cable should I use when I hook up a PC to a router?
- Counter DOS attacks. DOS
- Connect intermittently
- Ping ping
- Kill connection

6.1

a.

- certificate
- critical
- estimate
- illustrate
- key person

c.

A: Have you heard of "project"?

B: Of course. I know "Project X" is a very popular TV program.

A: A basic unit of system development is a project.

B: What about the size of a project?

A: The size varies from a large project, such as financial system, to a very small project.

B: It must be hard to manage a large project.

A: You are right. Overseas "Project Manger" certificate exits. The Japanese authorities also started to review such a certificate.

B: What exactly do project mangers do?

A: Schedule management. Man-power management is the most critical one among others.

B: What do you mean by "man-power"

A: The total size of a system is calculated by the unit of man-power. Given that the system is an accumulation of programs, what do you think is the basis for this calculation?

B: Programs…I would say the number of lines.

A: Good guess! You estimate the number of programmers required for a particular project based on the number of total coding lines. The required man-power also differs from each project phase. You need to manage the total man-power total man-power by estimating it for each project phase.

B: Why does the man-power differ for each project phase?

A: Let`s illustrate. In determining a customer`s requirement, all you need is a key person. No matter how large a project may be, several key persons from several related departments can determine a core requirement for

the total system.

B: You only need such brains, don`t you?

A: Right. After preliminary and detailed design, what do you think will happen when the project proceeds to the coding and program development phase?

B: Such s large project needs quite a few programmers.

A: Programs can be developed by objects: therefore, they can be divided into a number of objects. Unlike program development, you can not divide your tasks into several objects when defining requirements.

6.2

- To do list
- Schedule management, progress management
- Critical path
- Man-power management
- Change management
- Trouble management

6.3

- Convoluted   programming language
- Wishy-washy
- Break project down into three chunks
- Make a bullet-proof system
- Caveats
- Be in crunch mode
- We have to finalize the bug by the end of this month.
- Gather requirements
- Prioritize
- Must-have features
- Nice-have features
- If we-had-another-five-years features
- Scale the function back
- The heavy-duty work
- Here is the nitty-gritty
- Scope creep
- Defect, glitch

- **The system doesn`t scale.**
- **Redo ~ from ground zero**
- **Proprietary**