

# Unit 1

## Automation

### Highlights

**Professional Preparation** What Is Automation?

**Professional Conversation** Automate the Factory

**Reading** Automatic Control Systems

**Grammar** Modal Verb

**Writing** E-mail for Business

**Culture Extension** Industrial Automation in China



## Professional Preparation



### What Is Automation?

**Situation:** The students are having a lesson in automation.

**Teacher:** What is automation? Anyone?

**Student A:** I think it is a technology that enables the system to run by itself.

**Teacher:** Exactly. Automation is the use of technology to perform tasks with reduced human assistance. Any industry that encounters repetitive tasks can use automation.

**Student B:** Like in factories?

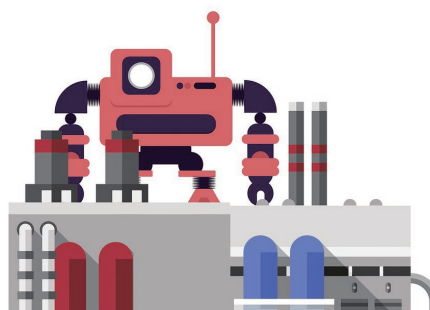
**Teacher:** Yes. Automation is very common in manufacturing. Can you think of other applications of automation?

**Student C:** Automation can be used in transportation.

**Student A:** It is also widely used in robotics and military operations.

**Teacher:** And don't forget utilities, including water and wastewater, oil and gas, electric power, and telecommunications.

**Student B:** Wow, automation really has a wide range of applications.



#### Practical Scene Sentence Patterns

What do you know about automation?

你对自动化了解多少?

Can you explain what automation is?

你能解释一下什么是自动化吗?

Automation is a term for technology applications where human input is minimized.

自动化是指使人力投入最小化的技术应用。

Industrial automation is the control of machinery and processes used in various industries by autonomous systems through the use of technologies like robotics and computer software.

工业自动化是指通过使用机器人和计算机软件等技术，依靠自动系统对各种工业中使用的机械和过程进行控制。

What are the applications of automation?

自动化有哪些应用?

What fields are automation used in?

自动化应用于哪些领域?

Manufacturing is one of the most important application areas for automation technology.

制造业是自动化技术最重要的应用领域之一。

The operation techniques being used in automobiles are improving and getting automated day by day.

汽车上使用的操作技术正在不断改进，自动化程度日益提高。

We depend on a lot of electronic devices for our routine life chores.

我们的日常生活琐事依赖于很多电子设备。

Life support systems and ventilators employ automatic devices to perform various special tasks.

生命维持系统和呼吸机采用自动装置来执行各种特殊任务。

Some examples of automatic machinery currently being used in the agriculture industry include harvesters, irrigation systems, plowing machines, self-driving tractors, etc.

目前，农业领域正使用一些自动化机械，例如收割机、灌溉系统、耕作机、自动驾驶拖拉机等。

### Exercise

#### I. Study the conversation and practical scene sentence patterns.

1. The students follow the teacher to read the conversation sentence by sentence.
2. Study the meanings of words and expressions in the conversation.
3. Read the practical scene sentence patterns, and notice the words used.

#### II. Match the words or expressions with their Chinese meanings.

automation	人工协助
human assistance	制造业
repetitive	自动化
manufacturing	军事行动
application	多次重复的
robotics	公共事业
military operation	机器人学
utility	应用

#### III. Pair work.

Work in pairs and talk about automation. Discuss its definition, applications, benefits, etc.

## Professional Conversation



### Automate the Factory

**Situation:** Eddie, a factory manager, is trying to persuade his boss Mr. Baker to automate the factory.

**Eddie:** Mr. Baker, I've been thinking that we should automate our factory, you know, to install some control systems and buy some equipment.

**Mr. Baker:** Why is that?

**Eddie:** Automation can help us reduce employee workload and greatly improve productivity.

**Mr. Baker:** But the investment will cost us a fortune.

**Eddie:** If we can get more done with less resource, we will cut costs in the long run.

**Mr. Baker:** I see. What else?

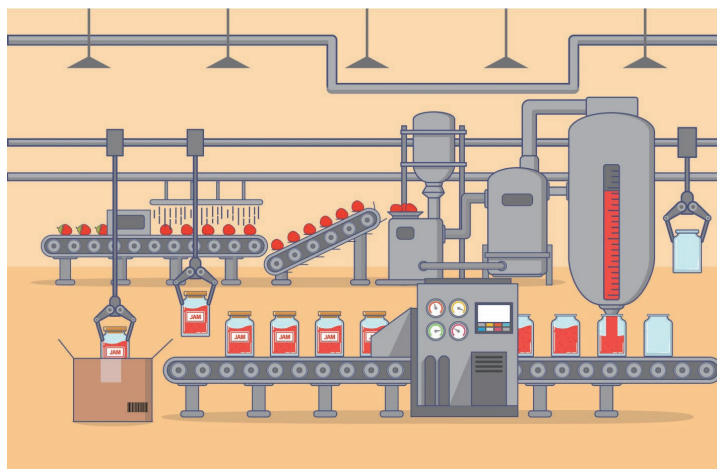
**Eddie:** By automating our manufacturing process, we can greatly reduce human errors and improve our product quality.

**Mr. Baker:** OK.

**Eddie:** What's more, an automated system can alert us when things go wrong. It will also help us prevent accidents.

**Mr. Baker:** I'm convinced. I'd like you to hand in a detailed proposal next week. Then we will discuss it further.

**Eddie:** Yes, Mr. Baker.



#### Practical Scene Sentence Patterns

Mr. Baker, have you got a minute?

贝克先生，您有空吗？

May I suggest we automate the manufacturing process?

我建议将生产过程自动化，可以吗？



I'm not sure that's a good idea.

我不确定这是个好主意。

I'm not too sure about that.

我不太确定。

Automating the assembly line will bring a number of benefits.

使装配线自动化会带来许多好处。

We can improve productivity, consistency, and efficiency with automation.

采用自动化流程，我们能够提高劳动生产率、产品的一致性和生产效率。

The main benefits of automating processes in manufacturing include reduced production cost, reduced waste, improved quality and reliability, and drastically reduced workplace-related accidents.

制造业实现过程自动化的主要好处包括降低生产成本、减少浪费、提高质量和可靠性，以及大幅减少与工作场所相关的事故。

Automation improves productivity by reducing time.

自动化通过减少时间来提高生产力。

If we automate industrial operations, we can ensure worker safety.

如果我们将工业操作自动化，我们就能确保工人的安全。

Another benefit of automation is the more efficient use of materials.

自动化的另一个好处是能够更有效地利用材料。

### Words and Expressions

1. automate ['ɔ:təmət] v.

to use machines and computers instead of people to do a job or task 使自动化

2. install [ɪn'stɔ:l] v.

to fix equipment into position so that it can be used or to put a new program into a computer 安装；建立程序

3. reduce [rɪ'dju:s] v.

to make sth. less or smaller in size, quantity, price, etc. 减少，缩小（尺寸、数量、价格等）

4. employee workload 员工工作量

5. productivity [prɒdʌk'tɪvəti] n.

the rate at which goods are produced 生产率，生产力

6. fortune ['fɔ:tʃu:n] n.

a large amount of money 大笔的钱，巨款

7. cut costs 压缩成本

8. in the long run 从长远看来，最终

9. alert [ə'leɪt] v.

to warn sb. about a dangerous or urgent situation 向……报警；使警觉，使警惕

10. go wrong 搞错；(计划等)不如意；(机器等)发生故障

11. hand in 交上，提交，呈送

12. proposal [prə'pəʊzl] n.

a formal suggestion or plan 提议，建议

### Basic Training

#### I. Fill in the blanks with the proper forms of the given words.

reduce      employee      install      fortune      alert

1. This fast-growing company has over 1,000 \_\_\_\_\_.
2. The hotel chain has recently \_\_\_\_\_ a new booking system.
3. Costs \_\_\_\_\_ by 5% over the past month.
4. \_\_\_\_\_ by a scream, he turned on the light and looked outside.
5. This car will cost me a(n) \_\_\_\_\_. I can't afford it.

#### II. Translate the following sentences into English.

1. 这些灵活的工作方式能提高生产率。(improve productivity)

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2. 这家公司正在寻找降低成本的方法。(cut costs)

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3. 从长远来看，5G 将发挥重要作用。(in the long run)

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4. 我现在得提交我的产品提案了。(hand in)

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5. 他们正在担心可能出现的问题。(go wrong)

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#### III. Scene practice.

Work in pairs. Student A is an employee of a factory. Student B is the factory owner. Student A wants to persuade Student B to automate the factory. The two students make a dialogue according to the above information. Pay attention to the sentence patterns.

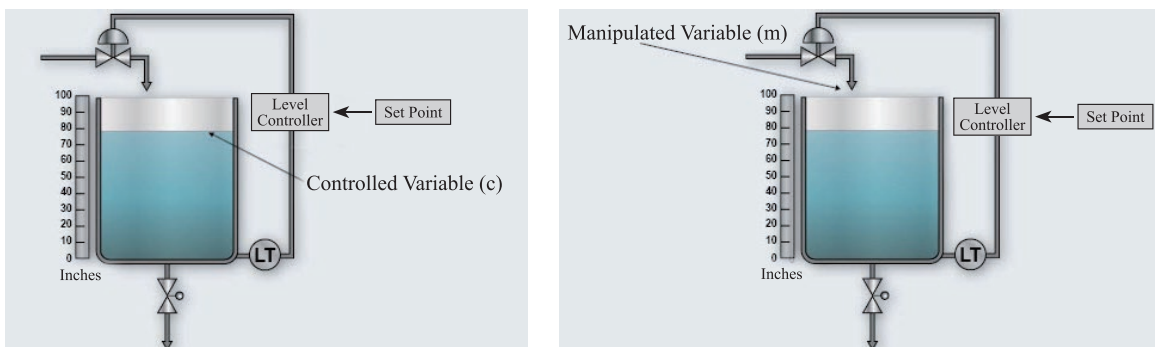
## Reading



## Automatic Control Systems

An automatic control system is a preset closed-loop control system that requires no operator action.

Automatic tank-level control system is one example. The system performs the task by continuously sensing the level in the tank and adjusting a supply valve to add more or less water to the tank. The desired level is preset by an operator, who is not part of the system.



Two variables are involved in the process: a controlled variable and a manipulated variable. The former is maintained at a specified value or within a specified range. In the previous example, the storage tank level is the controlled variable, and the flow rate of the water supplied to the tank is the manipulated variable. The latter is acted on the control system to keep the controlled variable at the specified value or within the specified range.

In any automatic control systems, the four basic functions that occur are: Measurement, Comparison, Computation, and Correction. In the water tank level control system, the level transmitter measures the level and sends a signal which represents the tank level to the level control device, where it is compared to a desired tank level. The level control device then computes how far to open the supply valve to revise any difference between actual and desired tank levels.

Automatic control systems have various applications. Other examples include the automatic temperature control system for lubricating oil, the automatic positioning system for a missile launcher, the automatic speed control system of a DC motor, etc.

## New Words

- preset [ˌpri:'set] *adj.* 预先设置的  
*v.* 预调, 预置; 给……预定时间
- operator ['ɒpəreɪtə(r)] *n.* 操作人员
- tank [tæŋk] *n.* 箱, 罐
- continuously [kən'tɪnjuəsli] *adv.* 连续不断地

maintain [meɪn'teɪn] *v.* 维持, 保持; 维修, 保养  
 specify ['spesɪfaɪ] *v.* 具体说明, 明确规定; 详述; 详列  
 previous ['pri:vɪəs] *adj.* 以前的, 先前的  
 function ['fʌŋkʃn] *n.* 功能  
 measurement ['meʒəmənt] *n.* 测量; 评估; 尺寸  
 computation [,kəmput'eɪʃn] *n.* 计算, 计算过程  
 device [dɪ'vaɪs] *n.* 仪器, 装置

### Phrases and Expressions

automatic control system	自动控制系统
closed-loop control	闭环控制
supply valve	供应阀
controlled variable	受控变量
manipulated variable	被控变量
level transmitter	物位变送器
lubricating oil	润滑油
DC motor	直流电动机

### Reading Practice

#### I. Fill in the blanks according to the passage.

In any \_\_\_\_\_ control systems, the four basic \_\_\_\_\_ that occur are: Measurement, Comparison, \_\_\_\_\_, and Correction. In the water tank level control system, the level transmitter measures the level and sends a signal which represents the tank level to the level control \_\_\_\_\_, where it is compared to a desired tank level.

#### II. Fill in the blanks with the words given, changing the form of the words when necessary.

preset	tank	previous	function
measurement	maintain	operator	continuously

- Elevators used to require a(n) \_\_\_\_\_ to operate the machine.
- Last night, he \_\_\_\_\_ the video recorder at the desired time.
- What is his \_\_\_\_\_ on the committee?
- His \_\_\_\_\_ attempts have been unsuccessful.
- The device \_\_\_\_\_ measures the body temperature.
- Accurate \_\_\_\_\_ is required in science.



7. Worker training must \_\_\_\_\_ at a high level.  
8. Is there any water left in the water \_\_\_\_\_?

### III. Translate the following expressions and sentences into Chinese.

- automatic control system \_\_\_\_\_
- closed-loop control \_\_\_\_\_
- controlled variable \_\_\_\_\_
- manipulated variable \_\_\_\_\_
- level transmitter \_\_\_\_\_
- In the previous example, the storage tank level is the controlled variable, and the flow rate of the water supplied to the tank is the manipulated variable.  
\_\_\_\_\_  
\_\_\_\_\_
- In any automatic control systems, the four basic functions that occur are: Measurement, Comparison, Computation, and Correction.  
\_\_\_\_\_  
\_\_\_\_\_
- The level control device then computes how far to open the supply valve to revise any difference between actual and desired tank levels.  
\_\_\_\_\_  
\_\_\_\_\_

### IV. Match the professional phrases with their Chinese meanings.

principle of circuits	控制板
electrical machinery	电路原理
digital electrical technique	数字电子技术
electrical drive and control	电力机械
low voltage	电力传动与控制
operating panel	低电压

## Grammar

### Modal Verb

#### 一、情态动词的基本特征

- 情态动词表示估计某事要发生，或期待某事发生，不表示正在发生的事情或已经发生的事情。

2. 情态动词后一般接不带 to 的不定式。
3. 情态动词没有人称和数的变化，第三人称单数作主语时，情态动词不加 -s。
4. 情态动词没有非谓语（不定式、动名词和分词）形式。

## 二、情态动词的用法详解

### 1. can & be able to

1) can (过去式 could) 表示能力、可能，只用于一般现在时和一般过去时，而 be able to 可以用于各种时态。

She can take good care of herself. 她能照顾好自己。

He will be able to tell you the results soon. 他很快就能告诉你结果了。

### 2) 只能用 be able to 的情况

- a. 在助动词后。
- b. 在情态动词后。
- c. 表示过去某时刻的动作时。
- d. 在句首表示条件时。

### 3) 表示成功地做了某事，只能用 was/were able to，不能用 can 或 could。

They were able to flee Europe before the war broke out.

= They managed to flee Europe before the war broke out. 战争爆发前，他们离开了欧洲。

注意：could 在有些情况中不表示时态。

### a. 表示提出委婉请求，回答中不能用 could。

—Could you speak English? 你会说英语吗?

—Yes, I can. / No, I can't. 是的，我会。/ 不，我不会。

### b. 表示怀疑或推测，用在否定和疑问句中。

He couldn't be a bad man. 他不太可能是坏人。

### 2. may & might

二者都可表示允许、请求或没有把握的推测；当 may 放在句首时，表示对他人的祝愿。

May God bless you! 愿上帝保佑你!

Tom might be at home. 汤姆可能在家。

注意：might 表示推测时，不表示时态，其可能性比 may 要小。

固定搭配：may/might as well，后面接不带 to 的不定式，意为“还是……为好，不妨”。

You may as well start at once. 你还是马上动身为好。

### 3. have to & must

#### 1) 二者都表示必须，have to 表示客观情况需要，must 则表示说话人主观上的看法。

My little sister was very ill, so I had to call the doctor in the middle of the night. 我妹妹病得很厉害，我只得半夜里把医生请来。（客观上需要做这件事）

She said that she must work hard. 她说她必须努力工作。（主观上要做这件事）

#### 2) have to 有人称、数和时态的变化，而 must 只有一种形式。

正：Mary had to look after her baby yesterday.

误: Mary musted look after her baby yesterday.

3) 在否定句中, don't have to 表示“不必”, mustn't 表示“禁止”。

You don't have to tell him about it. 你不必把此事告诉他。

You mustn't tell him about it. 你一定别把这件事告诉他。

4) must 表示推测, 其用法如下:

a. 用于肯定句中, 表示很有把握的推测, 意为“一定”。

b. 表示对现在的状态或正在发生的事情的推测时, must 后通常接系动词 be 的原形或行为动词的进行式。

You have worked hard all day, and you must be tired. 你已经辛苦工作了一整天, 一定累了。

David must be working in his office. 大卫一定在办公室工作呢。

比较下面两句话, 体会 must 表示必须和推测两种用法的区别:

He must be staying there. 他现在肯定待在那里。

He must stay there. 他必须待在那。

c. 表示对已经发生的事情的推测时, must 后接完成式。

I didn't hear the phone. I must have been asleep. 我刚才没有听到电话, 我一定是睡着了。

d. 表示对过去某时刻正在发生的事情的推测时, must 后接不定式的完成进行式。

—Why didn't you answer my phone call? 你为什么没接我的电话?

—Well, I must have been taking a shower, so I didn't hear it. 好吧, 我一定是在洗澡, 所以没听到。

e. 表示否定推测用 can't。

If Bill didn't leave here until six o'clock, he can't be home yet. 如果比尔六点才离开这儿, 他此时应该还未到家。

4. should & ought to

should 和 ought to 都表示应该, 可用于各种人称。

—Ought they to go? 他们应该去吗?

—Yes. I think they ought to. 对, 我觉得应该。

5. had better

1) had better 表示应该, 最好还是, 相当于一个助动词, 其缩写形式是 'd better, 它只有一种形式, 后面要接动词原形。

It is rather cold. You'd better put on my coat. 天气相当冷。你最好穿上我的外套。

She'd better not play with the pet. 她最好不要和宠物玩儿。

2) had better have done sth. 表示与事实相反的结果, 意为“本来最好”。

You had better have come earlier. 你本来最好早点儿来。

注意: 表示要求, 命令时, 语气上由弱到强的顺序是: should (应该) < had better (最好) < must (必须)。

6. would rather

would rather 表示宁愿, 后接动词原形, 其否定形式为 would rather not do sth.。would

rather 常和 than 连用，构成句式 would rather... than... 意为“宁愿……而不愿……”。另外，would sooner、had rather、had sooner 都可表示“宁愿、宁可”的意思。

I would rather stay here than go home. = I would stay here rather than go home. 我宁愿待在这儿也不愿回家。

#### 7. will & would

1) 二者都可表示习惯和倾向性，will 表示现在的习惯，would 表示过去的习惯。would 的常见习语是 would like; would like to do 与 want to do 意思相近，意为“想要”。

Would you like to come with us? 你想和我们一起去吗？

当 Would you like...? 表示想要得到对方肯定的回答时，该疑问句中一般用 some，而不用 any。

Would you like some drink? 你想喝点什么吗？

2) 否定结构中常用 will，一般不用 would。won't you 是一种委婉语气。

Won't you sit down? 你要不要坐下？

#### 8. need & dare

二者既可作为实义动词，又可用作情态动词。

作实义动词时，need 后的不定式必须加 to，dare 后的 to 可以省略。

作情态动词时，两者都只能用于疑问句、否定句和条件句中。

1) 实义动词：need (需要, 要求)

need+n. / to do sth.

2) 情态动词：need 后加动词原形 do，其否定形式为 need not do。

Need you leave yet? 你还要走吗？

Yes, I must. / No, I needn't. 是的，要走。/ 不，我不走了。

3) need 的被动含义：need doing 可表示被动，相当于 need to be done。

Keep a list of all the jobs that need doing. 把所有该做的事列一张清单。

#### 9. 情态动词 need 和 must 的回答方式

问句	肯定回答	否定回答
Need you...?	Yes, I must.	No, I needn't.
Must you...?	Yes, I must.	No, I needn't. / No, I don't have to.

#### 10. 情态动词 + have + 过去分词

1) may/might have done sth., can/could have done sth. 推测过去时间可能发生的事情。

George may/might have been hurt seriously in the traffic accident.

George can/could have been hurt seriously in the traffic accident.

乔治可能在交通事故中受了重伤。

2) must have done sth. 对过去时间可能发生的事情的推测，语气较强，可能性较大，具有“肯定”的意思。

Sue must have gone by taxi. 苏一定是乘出租车去的。

3) ought to have done sth., should have done sth. 表示本应该做某事，而事实上并没有做。



它们的否定形式表示不该做某事而做了。

You ought to / should have been more careful in this experiment. (本该认真却没有)

He ought not to have thrown the old clothes away. (不该把衣服扔了却已经扔了)

注意: ought to 在语气上比 should 要强。

4) needn't have done sth. 表示本没必要做某事。

I dressed very warmly for the travel, but I needn't have done so. The weather was hot. 我为这次旅行穿得很暖和, 但我本不必这样做的。因为天气很热。

5) would like to have done sth. 表示本打算做某事。

I would like to have read the article, but I was very busy then. 我本想读这篇文章的, 但我当时很忙。

### Exercise

Choose the best answer.

- Nick \_\_\_\_\_ come with us this afternoon, but he isn't very sure yet.  
A. must                      B. may                      C. can                      D. will
- Shall we go to the cinema or stay at home?  
—Which \_\_\_\_\_ do?  
A. do you rather      B. would you rather      C. will you rather      D. should you rather
- Could I borrow your exercise book?  
—Yes, of course you \_\_\_\_\_.  
A. might                      B. will                      C. can                      D. should
- Shall I tell Joe about it?  
—No, you \_\_\_\_\_. I've told him already.  
A. needn't                      B. wouldn't                      C. mustn't                      D. shouldn't
- Don't forget to come to my birthday party this weekend.  
—No, \_\_\_\_\_.  
A. I don't                      B. I won't                      C. I can't                      D. I haven't
- Bob ought not to \_\_\_\_\_ me your secret, but he meant no harm.  
A. have told                      B. tell                      C. be telling                      D. having told
- These magazines \_\_\_\_\_ out of the reading room. You have to read them here.  
A. can't take                      B. must be taken                      C. can take                      D. mustn't be taken
- She passed me in the street without speaking. She \_\_\_\_\_ me.  
A. can't see                      B. couldn't have seen  
C. shouldn't have seen                      D. shouldn't see
- There were already five people in his car, but they managed to take me as well.  
—It \_\_\_\_\_ a comfortable journey.  
A. can't be                      B. shouldn't be                      C. mustn't have been      D. couldn't have been

10. Betty \_\_\_\_\_ be here now because she has just gone to New York.  
 A. mustn't            B. can't            C. needn't            D. may not
11. To make our city more beautiful, rubbish \_\_\_\_\_ into the river.  
 A. needn't be thrown            B. mustn't be thrown  
 C. can't throw            D. may not throw
12. There was plenty of time. They \_\_\_\_\_.  
 A. mustn't have hurried            B. couldn't have hurried  
 C. must not hurry            D. needn't have hurried
13. I didn't hear the phone. I \_\_\_\_\_ asleep.  
 A. must be            B. must have been  
 C. should be            D. should have been
14. Allen was a good runner so he \_\_\_\_\_ escape from the robbers.  
 A. might            B. must            C. would            D. was able to
15. We \_\_\_\_\_ last night, but we went to the pub instead.  
 A. must have studied            B. might study  
 C. should have studied            D. would study
16. When the traffic lights are red, you \_\_\_\_\_ stop.  
 A. can            B. may            C. must            D. will
17. Your face looks very pale. You \_\_\_\_\_ be ill.  
 A. mustn't            B. must            C. can            D. can't
18. —Could I use your dictionary?  
 —Yes, of course you \_\_\_\_\_.  
 A. must            B. could            C. can            D. might
19. Calvin, you \_\_\_\_\_ play with the knife. You \_\_\_\_\_ hurt yourself.  
 A. won't; can't            B. mustn't; may  
 C. shouldn't; must            D. can't; shouldn't
20. Sir, you \_\_\_\_\_ be sitting in this waiting room. It is for women and kids only.  
 A. oughtn't to            B. can't            C. won't            D. needn't

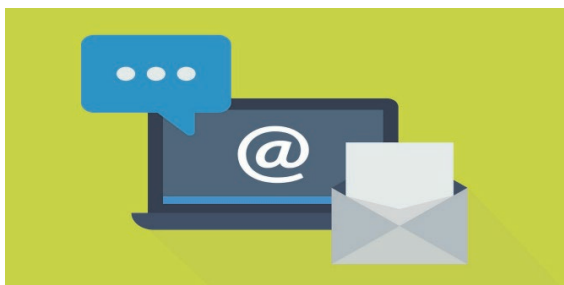
## Writing

### E-mail for Business

在商务往来中，电子邮件起到了很重要的作用。商务电子邮件是介于便条和书信之间的一种书面沟通方式。在商务场合中，绝大多数员工利用电子邮件来联系公务。

商务电子邮件主要由收件人地址、发件人地址、日期、主题、收件人称呼、正文、礼貌性结束语和本人签名构成。商务邮件的主题要具体而简洁。

商务电子邮件正文和结尾部分的格式与普通书信或便条相同。



### Sample 1

To: Alex67890@yahoo.com  
 From: Mary12345@sina.com  
 Date: Oct. 28, 2022  
 Subject: Request for commodity details

Dear Alex,

We know that you are exporters of floor materials. We would like you to send us details of your various ranges, including colors and prices, and also samples of the different qualities of wood used.

We are volume dealers in floor materials and believe this is a promising market in our area for moderately priced goods.

When quoting, please explain your terms of payment and discount you would allow on purchases of quantities of more than 1,500 meters of individual items. Prices quoted should include insurance and freight to Paris.

Best wishes,  
 Mary

### Sample 2

To: Annie110088@hotmail.com  
 From: Wangming110077@hotmail.com  
 Date: Mar. 11, 2022  
 Subject: Feedback of transaction

Dear Annie,

Thank you for your purchase of the book *Introduction to Automation* through Internet. We have sent out the book and it is expected to arrive in 5 days. I hope you could leave some feedback on the website after receiving it. I'll appreciate it very much if you can recommend it to other customers.

Recently, there will be several new books on sale. We can offer you some discounts for your

second purchase. Thank you.

Yours sincerely,  
Wang Ming

### Sample 3

To: Alexander245@hotmail.com

From: Wangdong332@qq.com

Date: Aug. 23, 2022

Subject: Business trip

Dear Mr. Alexander,

Welcome you to Xiamen. My name is Wang Dong, a clerk of Zhongding Trading Company. I have reserved a room for you at Riyue Hotel. It's about 15 km from the International Airport to the hotel. We will pick you up at the airport.

Would you please come to my office to have a talk with us over our business the next day you reach Xiamen? You may call me if you need any help.

Looking forward to seeing you soon here.

Yours sincerely,  
Wang Dong

### Writing Practice

Write an e-mail according to the information given in Chinese.

1. 发件人: Adam White (AdamWhite135@vip.163.com)

收件人: 酒店销售部 (hotelmarketing@expedia.com)

发件时间: 9月21日

主题: 取消酒店预订

事由:

(1) 因商务洽谈行程改变, 取消以 Adam White 的名义在贵酒店预订的9月25日至27日的一个双人房间。

(2) 表示歉意, 并询问是否需要支付违约金。

(3) 要求回信确认。

#### Words for reference:

违约金 cancellation penalty

双人房间 double room

以……的名义 under the name of



To: \_\_\_\_\_

From: \_\_\_\_\_

Date: \_\_\_\_\_

Subject: Cancellation of hotel booking

Dear Sir or Madam,

I am writing to inform you that \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Yours faithfully,  
Adam White

2. 发件人: PRdepartment@aston.com

收件人: WangQiang@163.com

日期: 2022 年 11 月 18 日

主题: 预订房间

事由:

(1) 我们要在 11 月 23 日至 25 日在铂尔曼酒店 (Pullman Hotel) 预订两个带浴室的单人房和五个带浴室的标准房, 还要在 11 月 26 日下午租用商务会议室一间。

(2) 请尽快答复, 告之是否有空房、房价以及是否需要预付押金。

To: \_\_\_\_\_

From: \_\_\_\_\_

Date: \_\_\_\_\_

Subject: \_\_\_\_\_

Dear Sir or Madam,

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Yours faithfully,

## Culture Extension

### Industrial Automation in China

China's industrial automation market mainly consists of hardware and software manufacturers, system integrators, product distributors and so on. China is one of the world's largest markets of industrial automatic control system devices.

As one of the leading manufacturing countries in the Asia-Pacific region and globally, the increase in shipment of industrial robots in the country and the adoption of various industrial control system software across the country have promoted factory automation at scale.



In addition, government incentives and targets have advanced the potential of the Chinese market to dive into factory automation. In 2015, the Chinese government initiated the national strategy "Made in China 2025", encouraging domestic players to decrease dependency on foreign players. The transformation demands a large number of industrial automation systems and devices, and industrial control automation technology has been developing rapidly in the direction of intelligence, network and integration.

The rapidly soaring labor costs and declining manufacturing labor force supply in China are also helping in the penetration of industrial robots and factory automation.

This is the best time for Chinese manufacturers in particular to get on the "Made in China 2025" bandwagon by learning from and adopting the latest smart manufacturing technologies. With the significant support from the government, manufacturers in China have access to appropriate technologies and solutions from Chinese and other suppliers and many excellent opportunities to increase competency in smart manufacturing and related areas. Meanwhile, manufacturers need to focus on quality production and environment-friendly manufacturing regulations.