

PC 512

Technical Writing and Communication Skills

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English Language

- Global
- Internet, Computer Languages, Operating Systems ...
- About 60% of Internet
- About 70% of Businesses
- About 90% of Universities
- About 98% of Technical Literature

English Language

- Different from Hindi, Bengali, Gujrati, ...
- Difficult to master
- Effort is needed
- Practice is needed

English

- American
- British

Set your Spell-checker (Dictionary) and Grammar-checker either to
en-US or **en-UK**.

American vs British English

- Words

1. elevator / lift
2. garbage / rubbish
3. vacation / holiday
4. truck / lorry
5. sweater / jumper
6. cookie / biscuit
7. french fries / chips
8. line / queue
9. parking lot / car park
10. silverware / cutlery

American vs British English

- Spelling

- Most words ending in -our in British English are spelled without the u in American English (humour/humor, behaviour/behavior, etc.)
- Most words ending in -re in British English are spelled with -er in American English (centre/center, litre/liter, etc.)
- Many British English verbs ending in -ise are spelled with -ize in American English (realise/realize, organise/organize, etc.).

American vs British English

In British English, people use the present perfect to speak about a past action that they consider relevant to the present. The present perfect can be used in the same way in American English, but people often use the past simple when they consider the action finished. This is especially common with the adverbs *already*, *just* and *yet*.

British English	American English
<i>He isn't hungry. He has already had lunch.</i> <i>- Have you done your homework yet?</i> <i>- Yes, I've just finished it.</i>	<i>He isn't hungry. He already had lunch.</i> <i>- Did you do your homework yet?</i> <i>- Yes, I just finished it.</i>

American vs British English

In British English, a singular or plural verb can be used with a noun that refers to a group of people or things (a collective noun). We use a plural verb when we think of the group as individuals or a singular verb when we think of the group as a single unit.

In American English, a singular verb is used with collective nouns.

** Note that *police* is always followed by a plural verb.

British English	American English
<i>My family is/are visiting from Pakistan.</i> <i>My team is/are winning the match.</i> <i>The crew is/are on the way to the airport.</i> BUT: <i>The police are investigating the crime.</i>	<i>My family is visiting from Pakistan.</i> <i>My team is winning the match.</i> <i>The crew is on the way to the airport.</i> BUT: <i>The police are investigating the crime.</i>

American vs British English

In British English, people often use *Shall I ...?* to offer to do something and/or *Shall we ...?* to make a suggestion.

It is very unusual for speakers of American English to use *shall*. They normally use an alternative like *Should/Can I ...?* or *Do you want/Would you like ...?* or *How about ...?* instead.

British English	American English
<i>It's hot in here. Shall I open the window?</i> <i>Shall we meet in the café at 5?</i> <i>Shall we try that again?</i>	<i>It's hot in here. Can I open the window?</i> <i>Do you want to meet in the café at 5?</i> <i>How about we try that again?</i>

<https://learnenglish.britishcouncil.org/>

Sentences

- Always write complete sentences in your technical documents.

A Sentence

- Subject + Predicate
- A Predicate must have a verb.
- First letter → Capital
- End with a **Fullstop or Period (.)** or a **Question Mark (?)** or an **exclamation mark(!)**

- *He already had lunch.*
- *I read books.*
- *A student died from a heart-attack.*
- *The students who are absent in the lecture will get a bad grade!*
- *Go to the RC to read books.*
- *Do you live outside the campus?*

Sentences

The open problems discuss concepts which includes the optimization techniques and potential complexities and suggests exploring information about the coefficients and their asymptotic properties. Also explores the possibility of finding a total function that satisfies the generalized Takeuchi recurrence. Then addresses the possibility of looping and whether the expanded Takeuchi recurrence equation could potentially lead to an infinite loop in certain cases.

Clauses

- A clause is a group of words that contains a subject and a verb that have a relationship.
- This relationship is crucial; a clause conveys information about what that subject is or is doing, rather than simply being a random grouping of words.
- A Sentence must have at least One Clause.

Find Clauses above.

Clauses - Exercise

- “A struct is an aggregate data type that groups together zero or more named values of arbitrary types as a single entity. Each value is called a field. The classic example of a struct from data processing is the employee record, whose fields are a unique ID, the employees’ name, address, date of birth, and the like. All of these fields are collected into a single entity that can be copied as a unit, passed to functions and returned by them, stored in arrays, and so on.”

Find clauses above

(from [The Go Programming Language](#), Donovan and Kernighan)

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Clauses in the previous exercise

- A struct is an aggregate data type
- that groups together zero or more named values of arbitrary types as a single entity.
- Each value is called a field.
- The classic example of a struct from data processing is the employee record,
- whose fields are a unique ID, the employees' name address, date of birth, and the like.
- All of these fields are collected into a single entity
- that can be copied as a unit,
- (that can be) passed to functions and
- (that can be) returned by them,
- (that can be) stored in arrays, and so on.

Independent Clause

- A group of words that contains a subject and a verb and expresses a complete thought.
- An independent clause = A simple sentence
 - Sita reads a book.
 - Hiking and biking are my favorite summertime activities.
 - We can hardly wait to see the movie.

Dependent Clause

- A group of words that contains a subject and a verb but does not express a complete thought.
- A dependent clause is not a sentence.
 - when Sita reads a book
 - because he was late
 - a book for Sita

Clauses in the previous exercise

- A struct is an aggregate data type
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- The classic example of a struct from data processing is the employee record,
- whose fields are a unique ID, the employees' name address, date of birth, and the like.
- All of these fields are collected into a single entity
- that can be copied as a unit,
- (that can be) passed to functions and
- (that can be) returned by them,
- (that can be) stored in arrays, and so on.

Sentences

- Simple
- Compound
- Complex

Simple Sentences

A simple sentence has one independent clause.

Examples:

1. I bought my friends some candy.
2. John reads novels.
3. John reads newspapers.
4. John reads novels and newspapers. (compound object)
5. John reads and enjoys novels. (compound verb)
6. John and Jerry read novels. (compound subject)
7. John and Jerry reads and enjoys novels and newspapers. (compound subject, verb, object)

Compound Sentences

A sentence made up of two or more independent clauses (or complete sentences) connected to one another with coordinating conjunctions.

Examples:

The moon was bright and we could see our ways.

I looked for Mary and Samantha at the bus station, but they arrived at the station before noon and left on the bus.

I arrived at the office at 9, and my assistant came 10 minutes later, but she was sick so I told her to go home.

Coordinating Conjunctions

- fanboys
- for, and, nor, but, or, yet, so

I am going to the shop, for I have run out of milk.

I like swimming and I like running.

I have never been to France, nor have I been to Australia.

She does not like apples, but she loves bananas.

Eat up your dinner, or you will not have any pudding.

He has a dog, yet he wants a cat too.

It is my friend's birthday, so I will get a present for him.

Complex Sentences

A Complex Sentence has at least one dependent clause (headed by a subordinating conjunction or a relative pronoun) joined to an independent clause.

Example:

-They rested **when** evening came.

- **As** the boxers advanced into the ring, the people said **that** they would not allow them to fight.

The people said. (Independent clause)

As the boxers advanced into the ring (Dependent Adverb clause)

that they would not allow them to fight. (Dependent Noun clause)

SUBORDINATING CONJUNCTIONS

after
although
as
as if
as long as
as much as
as soon as
as though

because
before
even if
even though
how
if
in as much as
in order that

lest
now that
provided
since
so that
than
that
though

till
unless
until
when
whenever
where
wherever
while

Examples of SOCon

I am not going to work **because** I am sick.

I will not release her payment **unless** she completes her work.

The government might agree to their demands **provided** they follow the rules.

Although she is thin, she has a lot of strength.

Whenever his wife was out working, he would take care of the house.

As long as she lived, she took care of the orphanage.

I won't be back in Mumbai **until** the rain stops.

The child ran to her mother **as soon as** she saw her.

Relative pronouns



Pronoun	Usage	Example
which	<ul style="list-style-type: none">• Refers to things• Used in nonrestrictive clauses	My bike, which I've owned for three years, is in need of some maintenance.
	<ul style="list-style-type: none">• Refers to things• Used in restrictive clauses	The last bike that I owned wasn't very resilient.
who	<ul style="list-style-type: none">• Refers to people• Used as a subject pronoun	The man who lives next door to me is called Jam
whom	<ul style="list-style-type: none">• Refers to people• Used as an object pronoun	I don't know the names of my other neighbors, whom I've never met.

Sentences

- Using simple, compound and complex – many varieties of sentences
- In your technical writing, stick to a pure variety and do not mix.

Technical Writing

- “A struct is an aggregate data type that groups together zero or more named values of arbitrary types as a single entity.
- Each value is called a field.
- The classic example of a struct from data processing is the employee record, whose fields are a unique ID, the employees’ name, address, date of birth, and the like.
- All of these fields are collected into a single entity that can be copied as a unit, passed to functions and returned by them, stored in arrays, and so on.”

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Elegant Writing

...score and seven years ago our fathers brought forth on this continent a new nation, conceived in Liberty, and dedicated to the proposition that all men are created equal.

...we are engaged in a great civil war, testing whether that nation or any nation so conceived and so dedicated, can long endure. We are met on a great battle-field of that war. We have come to dedicate a portion of that field, as a final resting place for those who here gave their lives that that nation might live. It is altogether fitting and proper that we should do so.

...in a larger sense, we can not dedicate—we can not consecrate—we can not hallow—this ground. The brave men, living and dead, who struggled here, have consecrated it, far above our poor power to add or detract. **The world will little note, and little remember what we say here, but it can never forget what they did here.** It is for us the living, rather, to be dedicated to the unfinished work which they who fought here have thus far so nobly advanced. It is rather for us to be here dedicated to the great task remaining before us—that from these honored dead we take increased devotion to that cause for which they gave the last full measure of devotion—that we here highly resolve that these dead shall not have died in vain—that this nation, under God, shall have a new birth of freedom—and that government of the people, by the people, for the people, shall not perish from the earth.

Gettysburg Address – Abraham Lincoln

Summary

- Importance of English
- American vs. British English
- Basic English Sentences