**Explanation of Conditionals (B2 Level)**

In English, conditionals are used to express the relationship between two events or actions: one that depends on another. They are especially useful in scientific and technical contexts, such as programming, where actions or results depend on specific conditions. Conditionals also help express different levels of **probability** and **hypothetical situations**.

**Types of Conditionals and Their Probability Levels**

**1. Zero Conditional (100% certainty)**

The zero conditional is used for general truths, facts, or laws of nature. In computer science, it is like a rule or a logical condition that always leads to the same outcome.

* **Form**: If + Present Simple, Present Simple
* **Usage**: Used for facts and rules.

*Example*:

* + **If t**he server **crashes**, the system **stops** working.
  + If the value of the variable **is** 0, the program **terminates**.

In programming, this is like an if condition that always evaluates to the same outcome. It describes something that is always true under the given condition.

**2. First Conditional (High probability)**

The first conditional is used to talk about real, possible future events or actions. In computer science, it is similar to an event that depends on a specific condition in the future.

* **Form**: If + **Present** Simple, **Will** + Verb
* **Usage**: Used for real and likely situations.

*Example*:

* + If the user clicks the button, the file will download.
  + If the system detects an error, it will send an alert.

This can be compared to an if-else statement where the result depends on the current or future state. It is likely to happen if the condition is met.

**3. Second Conditional (Low probability or hypothetical)**

The second conditional expresses unlikely or hypothetical situations in the present or future. In computer science, it can represent an event that has a very low probability of happening or is imaginary.

* **Form**: If + **Past Simple**, **Would + Verb**
* **Usage**: Used for hypothetical or unlikely situations.

*Example*:

* + If I **knew (SAPESSI)** the password, I **would log** in (ENTREREI).   
     I **COULD** LOGIN (POTREI ENTRARE)  
     I **SHOULD** LOGIN (DOVREI ENTRARE)

* + If the server **were/WAS** (**FOSSE**) more powerful, it would handle (GESTIREBBE) more requests.  
    TO HANDLE = TO MANAGE = GESTIRE, PROCESSARE

This is often used when discussing hypothetical upgrades or changes in systems or algorithms that are unlikely in the present situation.

**4. Third Conditional (No probability – past hypothetical) IMPOSSIBLE TO HAPPEN**

The third conditional describes a situation in the past that did not happen. It is used to imagine a different outcome. In computer science, it could describe a system failure that could have been avoided if different actions had been taken.

* **Form**: If + **Past Perfect (CONGIUNTIVO PASSATO)**, Would have + Past Participle
* **Usage**: Used for hypothetical situations in the past.

*Example*:

* + If I **had backed up** **(AVESSI MEMORIZZATO)** the data, I wouldn’t have lost (**NON AVREI PERSO/PERDUTO) the files.**
  + If the system **had been updated** (FOSSE STATO AGGIORNATO) , it would have prevented (AVREBBE PREVENUTO) the security breach.

SECURITY BREACH = VIOLAZIONE DELLA SICUREZZA

This can be compared to scenarios where things went wrong due to missed actions or decisions in the past.

**5. Mixed Conditional (Combining past and present results)**

Mixed conditionals blend different times, often imagining how a past action would affect the present.

* **Form**: If + Past Perfect, Would + Verb
* **Usage**: Used for past conditions affecting present outcomes.

*Example*:

* + If **I had studied (3)** computer science, I **would be** (2) working as a developer now.

SE AVESSI STUDIATO ….. STAREI LAVORANDO COME SVILUPPATORE

* + If the bug **had been fixed** earlier, the system **would be stable** now.  
    SE IL BUG FOSSE STATO RISOLTO PRIMA, IL SISTEMA SAREBBE STABILE ORA.

**Probability and Conditionals**

In technical scenarios, conditionals often mirror **if-statements** in programming languages, but they also express **probability**:

* **Zero conditional** reflects **absolute certainty** (like laws or system behaviors that always happen).
* **First conditional** suggests a **high probability** of an event happening if a condition is met.
* **Second conditional** presents a **low probability** or **hypothetical** scenario.
* **Third conditional** shows **no probability**, discussing only past possibilities that didn’t happen.

**Quiz**

**Choose the correct conditional for each sentence.**

**1. If the code is optimized, the program \_\_\_ (run) faster.**

* a) runs
* b) would run
* c) will run
* d) would have run

**2. If the system had detected the bug, it \_\_\_ (fix) it immediately.**

* a) fixes
* b) would fix
* c) will fix
* d) would have fixed

**3. If the file exists, the program \_\_\_ (open) it.**

* a) opens
* b) would open
* c) will open
* d) would have opened

**4. If I were an administrator, I \_\_\_ (grant) you access to the database.**

* a) will grant
* b) would grant
* c) grants
* d) granted

**5. If the system crashes, the backup \_\_\_ (activate) automatically.**

* a) will activate
* b) activates
* c) would activate
* d) activated

**6. If they \_\_\_ (update) the firewall last year, the attack could have been prevented.**

* a) update
* b) would update
* c) updated
* d) had updated

**7. If the system detects malware, it \_\_\_ (notify) the administrator.**

* a) would notify
* b) will notify
* c) notifies
* d) would have notified

**8. If you \_\_\_ (read) the documentation, you would understand the function better.**

* a) had read
* b) read
* c) would read
* d) will read

**9. If the code is poorly written, the program \_\_\_ (crash).**

* a) will crash
* b) crashes
* c) would crash
* d) would have crashed

**10. If I \_\_\_ (know) Python, I would be able to complete the task more efficiently.**

* a) had known
* b) know
* c) knew
* d) would know