**Question: What is a fallacy? Discuss the two main types of fallacies.**

**Answer:** Generally speaking, fallacy means an error in reasoning. Errors in reasoning occur when the premises of an argument fail to support its conclusion. Such an argument is called fallacious. A fallacious argument may appear correct, but a close look into it shows that it breaks some rule of logic.

In a narrower definition, fallacies are typical mistakes in reasoning that have a pattern that can be identified and named. Different arguments which show the same kind of mistake in reasoning are said to commit a particular kind of fallacy.

**Fallacies are of two main types:**

**A) Formal Fallacy:** A formal fallacy is one which involves an error in the form, arrangement or technical structure of an argument. It is defined as a [deductive](https://en.wikipedia.org/wiki/Deductive) [argument](https://en.wikipedia.org/wiki/Argument) that is invalid. The argument itself could have true [premises](https://en.wikipedia.org/wiki/Premise), but still have a false [conclusion](https://en.wikipedia.org/wiki/Logical_consequence). The presence of a formal fallacy in a deductive argument does not imply anything about the argument's premises or its conclusion. Both may actually be true, but the deductive argument is still invalid because the conclusion does not follow from the premises in the manner described. Following is an example of a formal fallacy:

Premise: All Arabs are Muslims.

Premise: All Iranians are Muslims.

Conclusion: All Iranians are Arabs.

This argument fails on two levels. First, the premises are untrue because although many Arabs and Iranians are Muslim, not all are. More importantly, the two ethnic groups are sets that do not overlap; in spite of that, the two groups are being understood as identical because they share one quality in common. This makes the conclusion illogical. The argument is invalid—that is, the relationship between the premises doesn’t support the conclusion.

**B) Informal Fallacy:** Informal fallacy is a pattern of mistake that is made in the everyday use of language, in speaking as well as writing. It originates in a reasoning error other than a flaw in the logical form of the argument. Very often it involves bringing irrelevant information into an argument or it is based on assumptions that, when examined, prove to be incorrect. Arguments containing informal fallacies may be formally [valid](https://en.wikipedia.org/wiki/Validity), but still fallacious. Following is an example of an informal fallacy:

Premise: X is true for A.

Premise: X is true for B.

Conclusion: X is true for C, D, etc.

Here the problem is that conclusions are being drawn about all the things in a given class on the basis of our knowledge about very few members of that class. In our daily lives, we may commit this fallacy on a routine basis when we make or believe statements about things ‘generally’ are and how people of a certain group ‘generally’ behave.

To conclude, correct reasoning involves clear expression and valid form. Formal fallacies are a matter of invalid form. Informal fallacies are a matter of unclear expression. Formal fallacies are created when the relationship between premises and conclusion does not hold up or when premises are unsound; informal fallacies are more dependent on misuse of language and of evidence. Formal fallacies generally occur in deductive arguments; informal fallacies generally occur in inductive arguments. We encounter both formal and informal fallacies every day, but unlike formal fallacies, we cannot reduce informal fallacies to symbolic formulas. Also, because there are an almost infinite variety of inductive arguments, there is a much higher number of informal fallacies than that of formal ones.