1. Locators:

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| **Locators** | **WebDriver** | **When do you use?** | **When you cannot use?** |
| Id | id | Always (Most preferred) | Numbers |
| Name | name | If “id” does not exist | Duplicate |
| Link | linkText | If it is a link | Duplicate |
| Tag name | tagName | For collection of objects | Duplicate |
| Class name | className | When class is unique w/o spaces | White spaces, Duplicate |
| Xpath | xpath | If none of the above, works | Xpath can change |
| Style sheet | cssSelector | This is the last option you have! | CSS can change |

Note: These are all methods of 'By' class in selenium and through findElement method (of RemoteWebDriver class) or findElements, it will be called.

Referece: Go to <https://seleniumhq.github.io/selenium/docs/api/java/> link to see all Java Selenium classes and associated constructors and methods

2. Why ID is preferable than X-Path?

ID is the Preferred locator than X-Path because ID is Unique and is faster when compared to X-Path (slower since it traverses through the DOM). When you find an web element using ID, it would be easy to target the element successfully. Even though the DOM changes in the future, ID remains same, whereas xpath may become invalid.

Note: If the ID contains numbers, it is not preferable to use ID since those numbers keeps changing randomly.