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Notes

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1 Notes

- By default all rust crates link to standard library, which depends on the operating system for features such as threads, scheduling, file, or networking. It also includes `libc` library.
- We can disable inclusion of standard library in rust through the `no_std` attribute.
- Cargo.toml file in a rust project contains project configurations such as dependencies, author, version etc...
- Panic handler function is part of the standard library and it defines the function that the compiler should invoke when the `panic` occurs. Panic handler is a divergent function.
- Rust has a special syntax for `diverging functions` which are functions that do not return;
- `Language items` are special functions and types that are internally required by compiler.
- When you run a rust application first thing that gets executed is not your main function, it is a function that named start. The reason for that because `runtime environment` needs be set up and exists before your main application. This environment creates the stack places the right arguments on to the register.

2 References

- `libc`
 - <https://www.gnu.org/software/libc/>
- `attribute`
 - <https://doc.rust-lang.org/rust-by-example/attribute.html>

- **panic**
 - <https://doc.rust-lang.org/stable/book/ch09-01-unrecoverable-errors-with-panic.html>
- **Diverging Function**
 - <https://doc.rust-lang.org/1.30.0/book/first-edition/functions.html#diverging-functions>
- **Language Items**
 - <https://manishearth.github.io/blog/2017/01/11/rust-tidbits-what-is-a-lang-item/>
 - <https://doc.rust-lang.org/1.5.0/reference.html#language-items>
 - <https://doc.rust-lang.org/1.5.0/book/lang-items.html>
- **Runtime Environment**
 - https://en.wikipedia.org/wiki/Runtime_system
- **ABI**
 - https://en.wikipedia.org/wiki/Application_binary_interface
- **Cross Compiler**
 - https://en.wikipedia.org/wiki/Cross_compiler