# Grant guidelines for most popular grant categories

## Runtime Modules/Chains

substrate

### Applies to

Building/extending a Substrate pallet

### Requirements

#[macro\_use] extern crate asn1\_der;

use ::asn1\_der::{ FromDerObject, IntoDerObject };

#[derive(Asn1Der, Default)] // Now our struct supports all DER-conversion-traits

struct Address {

street: String,

house\_number: u128,

postal\_code: u128,

state: String,

country: String

}

#[derive(Asn1Der, Default)]

struct Customer {

name: String,

e\_mail\_address: String,

postal\_address: Address

}

let my\_customer = Customer::default();

// Serialization:

let mut serialized = vec![0u8; my\_customer.serialized\_len()];

my\_customer.serialize(serialized.iter\_mut()).unwrap();

// Deserialization (this returns our customer if the data is valid):

let my\_customer = Customer::deserialize(serialized.iter()).unwrap();

21

22

23

## Development Tools

IntelliJ Rust + visual Studio Code

### Applies to

Use IDE such as node template and IntelliJ Rust + visual Studio Code

### Requirements

Use javascript + rust language

--alice Shortcut *for* `--name Alice --validator` with session keys *for* `Alice` added to

keystore

--bob Shortcut *for* `--name Bob --validator` with session keys *for* `Bob` added to keystore

--charlie Shortcut *for* `--name Charlie --validator` with session keys *for* `Charlie` added to

keystore

--dave Shortcut *for* `--name Dave --validator` with session keys *for* `Dave` added to keystore

--dev Specify the development chain

--discover-local Enable peer discovery on local networks

--eve Shortcut *for* `--name Eve --validator` with session keys *for* `Eve` added to keystore

--ferdie Shortcut *for* `--name Ferdie --validator` with session keys *for* `Ferdie` added to

keystore

--force-authoring Enable authoring even when offline

-h, --help Prints help information

--light Experimental: Run *in* light client mode

--no-grandpa Disable GRANDPA voter when running *in* validator mode, otherwise disable the GRANDPA

observer

--no-mdns Disable mDNS discovery

--no-private-ipv4 Forbid connecting to private IPv4 addresses (as specified *in*

[RFC1918](https://tools.ietf.org/html/rfc1918)), unless the address was passed with

`--reserved-nodes` or `--bootnodes`

--no-prometheus Do not expose a Prometheus metric endpoint

--no-telemetry Disable connecting to the Substrate telemetry server

--no-yamux-flow-control Disable the yamux flow control. This option will be removed *in* the future once there

is enough confidence that this feature is properly working

--one Shortcut *for* `--name One --validator` with session keys *for* `One` added to keystore

--password-interactive Use interactive shell *for* entering the password used by the keystore

--prometheus-external Listen to all Prometheus data source interfaces

--reserved-only Whether to only allow connections to/from reserved nodes

--rpc-external Listen to all RPC interfaces

--tmp Run a temporary node

--two Shortcut *for* `--name Two --validator` with session keys *for* `Two` added to keystore

--unsafe-pruning Force start with unsafe pruning settings

--unsafe-rpc-external Listen to all RPC interfaces

--unsafe-ws-external Listen to all Websocket interfaces

--validator Enable validator mode

-V, --version Prints version information

--ws-external Listen to all Websocket interfaces

## UI Development

### Applies to

Use antdesign to build web applications Use react Native to develop mobile applications

### Requirements

React+React Native framework for development and testing

## Backend Developmen

### Applies to

Building a service/mobile aapp/webapp that relies on a back-end component

### Requirements

Use Java language and springboot+mybatis framework

The database is basically designed using the three paradigms of design

Backend hosted in the cloud

## Cryptography

### Applies to

New crypto library

Extending existing library's functionalities

### Requirements

Use the python language to build a consortium chain based on the LibraBFT algorithm