

# An Introduction to Polkadot

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# Introduction

## Polkadot

Polkadot utilizes a central chain called the relay chain which communicates with multiple heterogeneous and independent sharded chains called parachains.

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# Substrate

## What is Substrate?

Substrate is an open source, modular, and extensible framework for building blockchains.

Substrate provides the core components of a blockchain:

- ① Database Layer
- ② Networking Layer
- ③ Transaction Queue
- ④ Consensus Engine
- ⑤ Framework for Runtime Development

Each of Which can be customized and extended

# The Substrate Runtime

## Runtime

- 1 The runtime is the **block execution logic** of the blockchain, a.k.a the State Transition Function.
- 2 It is composed of FRAME Pallets

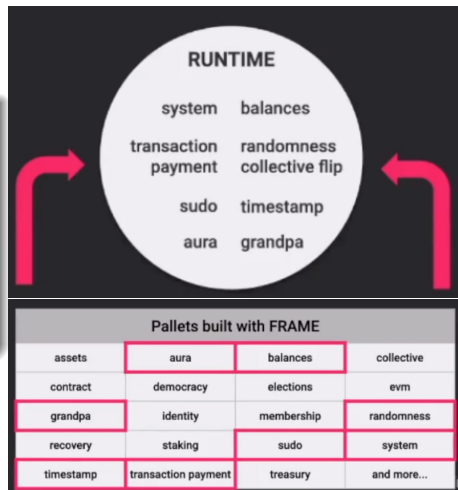
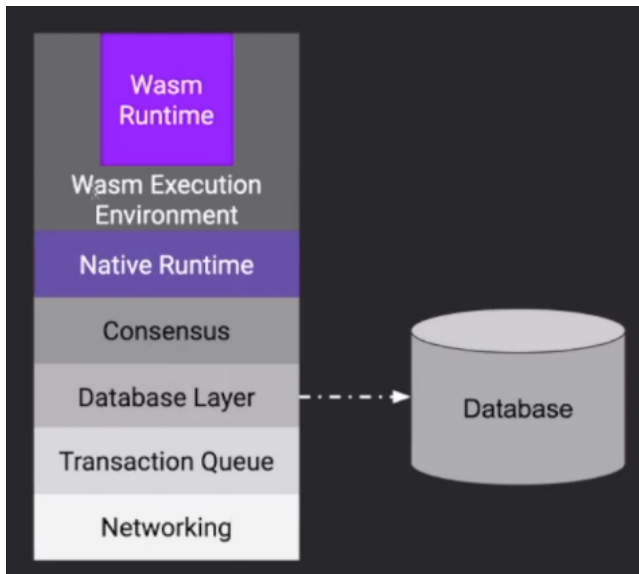


Figure: Runtime and Frame

# Building Blocks of Substrate



# Why WebAssembly

Wasm is a platform independent executable format

- Wasm is Sandboxed
- Wasm is Fast | item Wasm is Compact
- Wasm is Well Supported