```
                    ┌──────────────┐
                    │  Data type   │
                    └──────┬───────┘
                           │
                           ▼
                    ┌──────────────┐
                    │  Reading of  │
                    │    data      │
                    └──────┬───────┘
                           │
                           ▼
                    ┌──────────────┐
           ┌───────▶│Representation│
           │        │ of molecule  │
           │        └──────┬───────┘
           │               │
```

- Data type
- Reading of data
- Representation of molecule
- Van der waals interactions
- Electrostatic interactions
- Streching energy
- Bending energy
- Torsional energy
- Nonbonding interactions
- Force field energy
- Metropolis algorithm
- **No convergance**
- **Convergance**
- Writing of minimized configuration

Data types:

```fortran
type atom
! Setting the element in this project only C (carbon) or H (hydrogen)
character(1) :: element = 'E'
! The xyz coordinates of the atom in the molecule
real(realkind) :: x, y, z = 0.
end type


type bond
! Setting the indices of the atoms that are bonding
integer :: link(2) = 0
! Setting the type of bond in this project only CC or CH
character(2) :: type = 'EE'
! Setting the calculated distance of the bond in A
real(realkind) :: length = 0.
end type
```