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Procedural Programming - **C Project: Mining (Production of a NUCLEAR REACTOR/PLANT)**

Building (our own) a nuclear reactor to cut electricity cost (on imports).

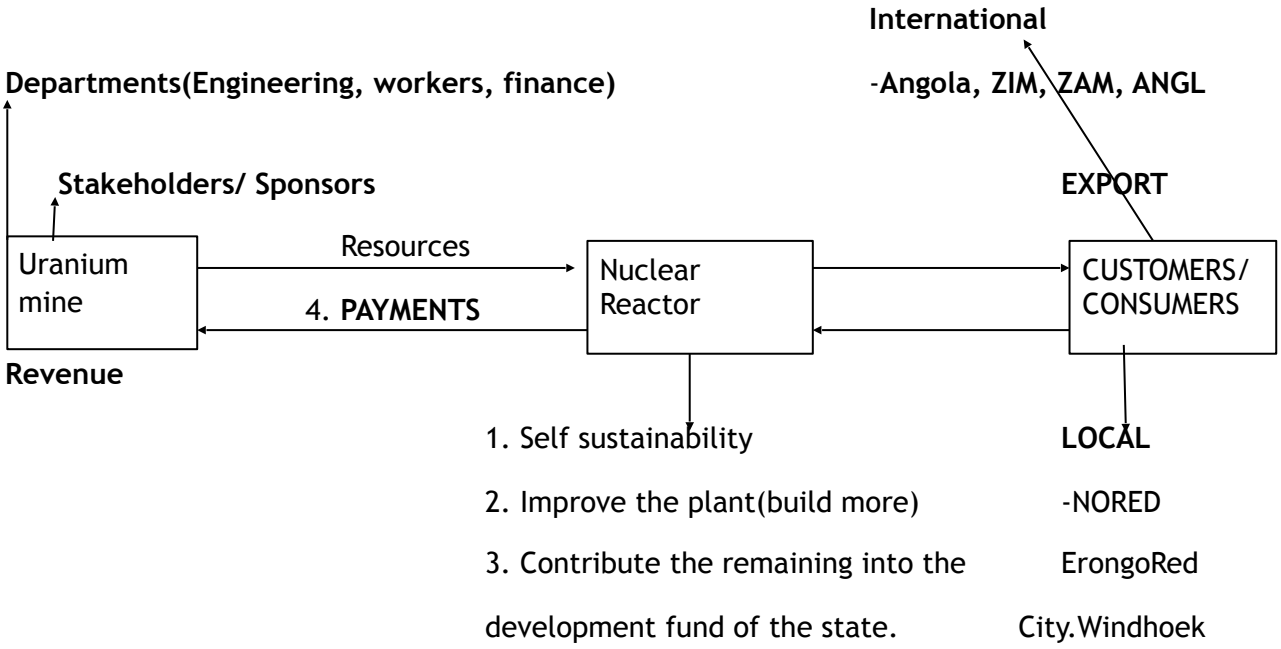
What we will need:

-Mining company/MINE (for the element Uranium needed for the plant)

-Investors/ Shareholders

-Customers(To whom we will export the electricity to)

**BASIC STRUCTURE (FOR A GOVERNMENT OWNED POWER PLANT)**




From this structure we can now identify our main focus. To build a nuclear power plant , one which will meet the above requirements. By doing this, we split the coding into

Three (3) parts:

1. **TENDER PROGRAM**
2. **OPERATIONAL PROGRAM**
3. **SALES PROGRAM**

**1. TENDER PROGRAM**

1. Invite for TENDER
2. Acceptance
3. Selection Criteria
4. Final Selection
5. Hire

Within this system we will include the DEVELOPMENT/ BUILDING of the reactor. The company hired, will need to meet all the criteria, which includes: workforce (Engineers, nuclear scientists, construction workers, miners). As well as mine the element needed, URANIUM for the success of the reactor.

**2. OPERATIONAL PROGRAM/SYSTEM**

1. Target market (locally or internationally?)
2. How much Uranium do we need to mine/ need to meet the target demands? (Depending on the target we would like to reach each year, as it may increase depending on the market)
3. Megawatts (MW) needed to generate in accordance to the target?
4. With Megawatts generated, can we supply to all?

Within this system we will need a sub system to calculate the operational costs. Such as

**e.g.: OPERATIONAL COST**

1. Target= 750MW
2. Raw URANIUM =105 000 Kg
3. Pure URANIUM =12 000 Kg

To generate the amount of Energy for that year needed, depending on our consumers.

## 3.SALES PROGRAM

In this section we look at sales, costs for a MW, based on factors such as

-Prices/ costs per MW (locally (NAMPOWER) or internationally(RSA, ZIM, ZAM, ANG) = ?

-DISTANCE (from the power plant) to the local/ international consumer(s) =?

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**NOTES**

The system will either cater for both Private and Government organisations. If for the government, stage one of the three phases will not be needed.

If it is private, stage one will be needed, with an additional phase which will generate income by means of either selling the uranium at a fee per Kg, of which a certain percentage (of a 100%) will be pumped into a reactor account. In proportion to this, the amount allocated to the development will depend on the Kg of Uranium sold and mined that month/year.

e.g.: PRODUCTION COST= N$1 000 000 000

Of the 100 000kg uranium mined= 10000kg will reserved for the plant & 90000kg sold at N$1000000 Per (preferred) kg

of which 20% of the sales obtained from the 90000 sold, will be pumped into the development account. Along with the costs obtained from investors and stakeholders. I could further say that once a certain amount is reached, different stages of the production could then start.

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