Ranges 6

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1 Introduction

for this assignment I got a list of seeds and maps where each seed need to go through the different maps and at the end each seed will get a location. Then when each seed have gotten a location the program will have to pick the smallest location where each location is represented as an Integer.

2 Parsing in the information

First the information have to be parsed into the program the structured into a fitting data structure. The fitting data structure is a list containing lists of tuples and the seeds will be turned into a list of integers. Then those two list can be inputted into a function called map() that return a list containing the location of the seeds. Here is the code implementing that:

```
def parse() do
   file = File.read!("sample.txt")
   file = String.trim(file)
   [h|t] = String.split(file, "\r\n\r\n")
   source = Enum.map(t,fn x -> [_|t] = String.split(x, "\r\n");t end)
   map = Enum.map(source, fn x -> convert(x) end)
   [_,b] = String.split(h,"seeds: ")
   input = String.split(b," ")
   seeds = Enum.map(input, fn x -> String.to_integer(x) end)
   list = map(seeds,map)
   min2(list)
 end
```

3 Going through the map

Then when going through the map with one seed in mind the maped() function will check if that seed is in range of any of the ranges in the map. If it is true then the seed will get a new value and move on to the next map

or if not then the seed will get to keep it's value when moving on to the next map. When the seed have gone through all of the maps then the final location is discovered. The is a code snippet to explain how it works:

```
def maped(num,[],list) do mapfun(num,list) end
def maped(num, [h|t], list) do
  {dest,source,range} = h
  case num in source..(source+range) do
    true -> mapfun(num-source+dest,list)
    false -> maped(num,t,list)
  end
end
def maped(num,list,[]) do num end
```

Another function in the program will return the result of all the seeds in the list as a list and then there is a min2() function that calculates the lowest value in that list.

4 Conclusion

This assignment was not particularly hard when it came to calculate individual seeds but for ranges then it got kind of trickier because in my opinion at least it becomes more abstract to think in ranges and less concrete. Well now on to the philosopher assignment.