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HW 4

1. ^a\*(ba\*ba\*)+$|^b\*(ab\*ab\*)+$
2. ^\s\*\/\\*(\\*(?!\/)|[^\*])\*\\*\/\s\*$

match (RE\_star RE\_empty) input = Nothing

match (RE\_star symbol) (head : input’) =

case match symbol (head : input’) of

Nothing -> Nothing

ok @ (Just input’) -> match (RE\_star symbol) input’

match (RE\_in\_set []) input = Just input

match (RE\_in\_set (symbol : symbol’)) (head : input’)

| symbol == head = match (RE\_in\_set (symbol : symbol’)) (input’)

| otherwise = Just (head : input’)

1. In the .hs file
2. A picture containing whiteboard, text

   Description automatically generatedA close up of text on a whiteboard

   Description automatically generated
3. Start state = A, accept state = G

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| State |  | X | Y | Z |
| A | B | C | F |  |
| B |  |  | H | G |
| C | H | C | A |  |
| F |  | G |  | G |
| G |  | C |  | F |
| H | C | H |  | H |

|  |  |  |  |
| --- | --- | --- | --- |
| State | X | Y | Z |
| AB | CH | CFH | G |
| B |  | CH | G |
| CH | CH | AB | CH |
| F | G |  | G |
| G | CH |  | F |

Start state = A, accept state = G, CGH

|  |  |  |  |
| --- | --- | --- | --- |
| STATE | X | Y | Z |
| AB | CH | CFH | G |
| B |  | CH | G |
| CH | CH | AB | CH |
| F | G |  | G |
| G | CH |  | F |
| CFH | CGH | AB | CGH |
| CGH | CH | AB | CFH |