

# Project 3

You are going to write a complete C program which implements the following functionality:

- You are given a file which contains lines of character strings of various sizes. Your program should read the given file and locate the following 5 strings:
  - Xanthos
  - Patara
  - Myra
  - Arycanda
  - Phaselis
- The 5 constant strings can appear vertically or horizontally. Once all the strings are found, your program should print their head position and the orientation to the terminal.
- Code it so that it reads a text file named `input.txt`

## Example

Contents of the input file:

```
askjdkdanmowflfkadjkaksklskksadllasd
fkfklsal;sdlslfsdkdfkMyraslfsfeokdlasdfdf
wfewfPsdflsdfklsdosfkeowkfweofkwoefkkfsf
sdfsakjewofksdfoiwefjowefks;dfPhaselissdfkefowefjksdlfjjslfsldfj
oefkwtifjslflsdfkjeifjssl;asldkiefjiefjlskfdjeifjksk
sdlfkawioAjkSDLfkkeifsflkefjiwfejsllfjeighghj;wp
dfkjerwfjr;s;dlskfjfiwflwekfjwlefiiegwefjiw
sdfkkafwXanthosdkfjlsAfdjiefeiwwewefiefjowiefehgl;lewofjefw
iieoefnFGSAiejfiwefjhrwefiiewefjiwjejihhwefklskdf
skkfjwifjwiiwifieifwfy[pwfpjwifwefijijwhi]
sdfijwiefjiwhiweijfiwcifjweofi;aiajdijeifwuiefhwoiefjowehi
iiwefiwe fjwiefjwiefjiajiefiiewjflkajsdLkfiewhfiwefjowiefhhaskjlskdfu
iwjefijefmmiewifjweifnklksjdiaifwefpwefijfiwfOWOEFIEWfnweiuf
jfnwefiwfpwfjiejfiwefdJwflLjfwiefjiwefwflijijfiewfhu
kkfiefiewpFkfjfhewfoawefkwoefoejwfowefkowefkowo
```

Output:

```
Xanthos (8,9) Horizontal
Patara (3,6) Vertical
Myra (2,22) Horizontal
Arycanda (8,22) Vertical
Phaselis (4,32) Horizontal
```

## Remarks:

- Strings which correspond to rows are separated by whitespace.
- Maximum length of each row is 250
- Maximum number of rows is 100

## Turn in:

A complete C program <Project3.c> which can be compiled using the following command:

```
gcc -std=c99 Project3.c -o Project3
```