Python Program:

```
from mrjob.job import MRJob
import re

class MRCharCount(MRJob):

    # Regular expression to match alphabetic characters
    WORD_RE = re.compile(r'[a-zA-Z]')

    # Mapper function
    def mapper(self, _, line):
        # For each character in the line, check if it is alphabetic
        for char in line:
            if char.isalpha():
                # Emit the lowercase of the alphabetic character and count 1
                yield char.lower(), 1

    # Reducer function
    def reducer(self, char, counts):
        # Sum all the counts for a particular character
        yield char, sum(counts)

if __name__ == '__main__':
    MRCharCount.run()
```

Input File(dataset.txt):

```
Hello World!
This side saurabh .
MapReduce is fun!
123 Numbers are ignored.
```

Output:

```
PS C:\Users\saura\Desktop\4th year study material\Lab Program\IR LAB> python Lab5.py
dataset.txt
No configs found; falling back on auto-configuration
No configs specified for inline runner
Creating temp directory
C:\Users\saura\AppData\Local\Temp\Lab5.saura.20241013.154753.582172
Running step 1 of 1...
job output is in
C:\Users\saura\AppData\Local\Temp\Lab5.saura.20241013.154753.582172\output
Streaming final output from
C:\Users\saura\AppData\Local\Temp\Lab5.saura.20241013.154753.582172\output...
"a"     4
"b"     2
"c"     1
"d"     4
"e"     7
"f"     1
"g"     1
```

```
"h"     3
"i"     4
"l"     3
"m"     2
"n"     3
"o"     3
"p"     1
"r"     6
"s"     5
"t"     1
"u"     4
"w"     1
Removing temp directory
C:\Users\saura\AppData\Local\Temp\Lab5.saura.20241013.154753.582172...
PS C:\Users\saura\Desktop\4th year study material\Lab Program\IR LAB>
```