Question

Write a complete C++ program to print the date of birth (DOB) and the age of a person. The user of the program is required to enter the DOB in the form of YYYYMMDD, for example if the DOB is 21st May 1988, then the user needs to enter 19880521. Edit the file to accomplish the following task requirements:

1. Validate whether the DOB has exactly 8 digits. If not, display an error message and terminate the program.
2. Validate whether all the characters in the DOB are digits. If not, display an error message and terminate the program.
3. Obtain the year, month and day from the DOB.
4. Validate whether the month is between 1 to 12. If not, display an error message and terminate the program.
5. Print the output into a text file. The file name should be formed from the DOB with an extension of ".txt". For example, if the DOB is "19880521", then the file name should be "19880521.txt". The output file should contain the following:
   - The DOB in text form (e.g. 21 May 1988)
   - The age

Figure 1 and Figure 2 show example runs of the program. Note that, the bold text in each example indicates the input entered by the user.

```
Enter your date of birth (YYYYMMDD) => 19931203
```

(a). User input

```
You was born on 3 December 1993.
Now, you are 23 years old.
```

(b). Corresponding output file: "19931203.txt"

Figure 1: An example run with a valid user input

```
Enter your date of birth (YYYYMMDD) => 931203

Error! The date must be 8 digits. Program ends here.
```

(a). Invalid length

```
Enter your date of birth (YYYYMMDD) => 03/12/93

Error! The ID contains non-digit characters. Program ends here.
```

(b). Invalid digits

```
Enter your date of birth (YYYYMMDD) => 19931303

Error! The month must be between 1 to 12. Program ends here.
```

(c). Invalid month

Figure 2: Example runs with invalid user inputs