

SAE 1

December 16, 2021

1 Short Assessed Exercise

2 Level 1

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2.2 30 September 2020

2.3 Version 1

2.4 Summary of the Question

Write a program to print out your initials down the page in block letters using the same letter to draw it out of. A blank line should separate the initials. Each initial should be printed by a separate method. For example, my initials are PC. My program should therefore print:

```
PPPPP
P   P
PPPPP
P
P
```

```
CCCCC
C
C
C
CCCCC
```

2.5 The literate program development

2.5.1 printE

What it does This method prints a large letter E made out of small letter E's ending with a blank line.

Implementation (how it works) It prints each row of small letter Es in turn. For example, the top of the E is made of 6 E characters in a row as the big letter is 6 characters wide.

```
[3]: // Print a large letter E using E characters
//
public static void printE ()
```

```
{
    System.out.println("EEEEEE");
    System.out.println("E");
    System.out.println("EEEEEE");
    System.out.println("E");
    System.out.println("EEEEEE");
    System.out.println();
    return;
}
```

Testing

```
[4]: printE ();
```

```
EEEEEE
E
EEEEEE
E
EEEEEE
```

2.5.2 printS

What it does This method prints a large letter S made out of small letter S's

Implementation (how it works) It prints each row of small letter S's in turn. For example, the top of the S is made of 6 S characters in a row as the big letter is 6 characters wide.

```
[5]: // Print a large letter S using S characters
//
public static void printS ()
{
    System.out.println("SSSSSS");
    System.out.println("S");
    System.out.println("SSSSSS");
    System.out.println("    S");
    System.out.println("SSSSSS");
    System.out.println();
    return;
}
```

Testing

```
[6]: printS();
```

```
SSSSSS
S
SSSSSS
```

```
    S
SSSSSS
```

2.5.3 printS

What it does This method prints a large letter E followed by a letter S below it

Implementation (how it works) This just calls the individual method to print each separate letter in turn, first E then S. As they each finish by printing a blank line they will be separated by a blank line.

```
[7]: // Print a large letter E followed by a letter S below it
    //
    public static void printES ()
    {
        printE();
        printS();
        return;
    }
```

Testing

```
[8]: printES();
```

```
EEEEEE
E
EEEEEE
E
EEEEEE

SSSSSS
S
SSSSSS
    S
SSSSSS
```

2.5.4 Running the program

Run the following call to simulate running the complete program.

```
[9]: printES();
```

```
EEEEEE
E
EEEEEE
E
EEEEEE
```

```
SSSSSS
S
SSSSSS
  S
SSSSSS
```

2.6 The complete program

This version will only compile here. To run it copy it into a file called initials.java on your local computer and compile and run it there.

```
[19]: /* *****
      @author   Esad Simsek
      @date     30 September 2020
      @version  1

      A program that prints my initials (ES)
      in big letters made out of small ones.
      *****/

class initials
{
    public static void main (String [] a)
    {
        printPC();
        System.exit(0);
    }

    // Print a large letter E using E characters
    //
    public static void printE ()
    {
        System.out.println("EEEEEE");
        System.out.println("E");
        System.out.println("EEEEEE");
        System.out.println("E");
        System.out.println("EEEEEE");
        System.out.println();
        return;
    }

    // Print a large letter S using S characters
    //
    public static void printS ()
    {
```

```

        System.out.println("SSSSSS");
        System.out.println("S");
        System.out.println("SSSSSS");
        System.out.println("    S");
        System.out.println("SSSSSS");
        System.out.println();
        return;
    }

    // Print a large letter E followed by a letter S below it
    //
    public static void printES ()
    {
        printE();
        printS();
        return;
    }
}

```

END OF LITERATE DOCUMENT