# PSDD – Creating Code - TASK 5 – Report Generator

To complete this worksheet you require a working webserver, e.g. WOS (website on a stick).

## Aim

The aim of this worksheet is to:
Create and test the php code for the design algorithm provided

## Skills and knowledge

Algorithms, Text files: reading and writing, Functions While loops, Binary selection
Creating and testing php code

## Outline

You have been given a problem definition, test data and algorithm. You need to create and test the php program code.

### Problem Description

A text file is created by people counting the colours of cars. You need to create a report of the colour cars counted including a graph of the data (see screen design).

The colours of the cars are recorded as:

| | |
|---|---|
| White: | W |
| Red: | R |
| Silver: | S |
| Yellow: | Y |
| Black: | B |
| Other: | O |

### Sample screen design report

**Car count**
Date: 31/03/2009

```
White   | *****|*****|**  12
Red     | *****|**  7
Silver  | *****|  5
Yellow  |  0
Blue    | ***  3
Other   | **** 4
Total Cars: 31
```

**Sample textfile**

```
31/03/09
W W R R R Y O B B S R W W O S R P
```

**IPO**

| Input | Process | Output |
|---|---|---|
| Select file<br>Data files | Read date<br>Read each character<br>Check character is a letter<br>Tally each colour | Date |
| Totals for each colour | Generate reports<br>Generate graph<br>Total colours | Graph<br>Totals |

**Algorithm**

```
BEGIN
        CALL countmodule(w,r,s,y,b,o)
        CALL displaymodule(w,r,s,y,b,o)
END
BEGIN countmodule(w,r,s,y,b,o)
        Select file
        Open file
        Initialise w,r,s,y,b,o to 0
        Read and display date
        Read next character
        WHILE (Not eof)
                IF (character is a letter) THEN
                        CASEWHERE character
                                = “w”
                                        w = w + 1
                                = “r”
                                        R = r + 1
                                = “s”
                                        S =s + 1
                                = “y”
                                        y = y + 1
                                = “b”
                                        b = b + 1
                        OTHERWISE
                                o = o + 1
                        END CASE
                END IF
                Read next character
        END WHILE
END
BEGIN displaymodule(w,r,s,y,b,o)
        Display “White”
        CALL displaystars(w)
        Display “Red”
        CALL displaystars(r)
        Display “Silver”
        CALL displaystars(s)
        Display “Yellow”
        CALL displaystars(y)
        Display “Blue”
        CALL displaystars(b)
        Display “Other”
        CALL displaystars(o)
        Total = w + r + s + y + b +o
        Display total
END
BEGIN displaystars(number)
        Temp = 0
        Line  = 0
        WHILE temp <= number
                Display “*”
                Temp = temp + 1
                Line = line + 1
                IF line >= 5 THEN
                        Display “|”
                        Line = 1
                ENDIF
        END WHILE
        Display number
END
```