LABORATORY 3 – REPORT

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Note: Coursework examiners are entitled to reject any coursework which does not have a signed copy of this form attached or are submitted late.

## Problem 1

The aim of this problem is to look at statements and to check if they are true or false

### Answers

1. True
2. False, as after the equation y will equal 8
3. False, as int \_a and float 1c is incorrect. A correct solution would be int integer\_a and float floatc
4. True
5. False, b is a float and the correct answer for 1.33333 recurring

## Problem 2

The aim of this problem is to write a C program that reads the dimensions of a rectangular field: length and width as well as the quantity of week killer required to treat the field.

### Plan

* Print a welcoming message.
* Ask the user to input data for the length, width and weed killer
* Store the input in type float.
* Calculate the area
* Calculate the amount of weed killer required to treat the field
* Convert the amount needed to liters/square feet.
* Display the results
* Print a goodbye message

### Development

The first step in the development of my program was to include the standard C libraries (stdio.h, stdlib.h,) that in order to be able to use certain functions in the program.

Then, I started to write the main function of the program.

I used the ‘printf’ command to display welcoming message on my screen on my screen. I used a void function to ask for the input from the user. I then used a separate void function to calculate both area and the amount of weed killer required. I called each of these functions from the main function.

### Testing

I compiled and tested the program using the gcc compiler. I was not presented any errors when I compiled my code.

The program ran smoothly without any errors

### Conclusion

During this lab session I learned about some of the functions contained in the stdio.h and stdlib.h libraries (e.g. functions).

The final version of the C source code for problem 2 is attached as weed\_killing.c

## Problem 3

The aim of this problem is to write a C program that reads three numbers, computes and displays their sum, their product and their average as well as the minimum and the maximum value of the three numbers.

### Plan

* Print a welcoming message
* Ask the user to input three numbers
* Do the calculations
* Display the results
* Print a goodbye message

### Development

The first step in the development of my program was to include the standard C libraries (stdio.h, stdlib.h, string.h) that in order to be able to use certain functions in the program.

Then, I started writing up the main function of the program. I used the ‘printf’ command to display welcoming message on my screen on my screen. I used a void function to ask for the input from the user. I then used a separate void function to calculate the sum, product, average, maximum and minimum. I used a if, else if, and else statements to check for the maximum and minimum.

### Testing

I compiled and tested the program using the gcc compiler. I was not presented any errors when I compiled my code.

### Conclusion

During this lab session I learned about some of the functions contained in the stdio.h, stdlib.h and string.h libraries (e.g. if statements)..

The final version of the C source code for problem 1 is attached as 3\_number\_calculation.c

## Problem 3

The aim of this problem is to write a C program that reads reads from the a positive integer N representing how many numbers we have to process then the program should read N numbers, compute and display their sum, their product and their average.

### Plan

* Print a welcoming message
* Ask the user for input
* Do the calculations
* Print the answers
* Print a goodbye message

### Development

The first step in the development of my program was to include the standard C libraries (stdio.h, stdlib.h, string.h) that in order to be able to use certain functions in the program.

Then, I started writing up the main function of the program. I used the ‘printf’ command to display welcoming message on my screen on my screen. I used a void function to ask for the input from the user. I then used a separate void function to calculate the sum, product, average. I used a for loop in the function to calculate the sum and average. I then used multiple ‘printf’ statements to display the results.

### Testing

I compiled and tested the program using the gcc compiler. I was not presented any errors when I compiled my code.

### Conclusion

During this lab session I learned about some of the functions contained in the stdio.h, stdlib.h and string.h libraries (e.g. for loops)..

The final version of the C source code for problem 1 is attached as n\_number\_calculation.c