

## P2 Describe the purpose and user requirements for the software program.

### 1. The purpose of the currency convertor program

The purpose of the program is to let this user select 2 currencies to convert from and to e.g. EUD to USD, input an amount and get back a result (amount \* exchange Rate)

### 2. The user requirements of the currency convertor program

The program must have at least 4 currency choice for each combo box , the program must have exchange rates which are attached to the choice the user chooses and let the user enter an amount of their choice

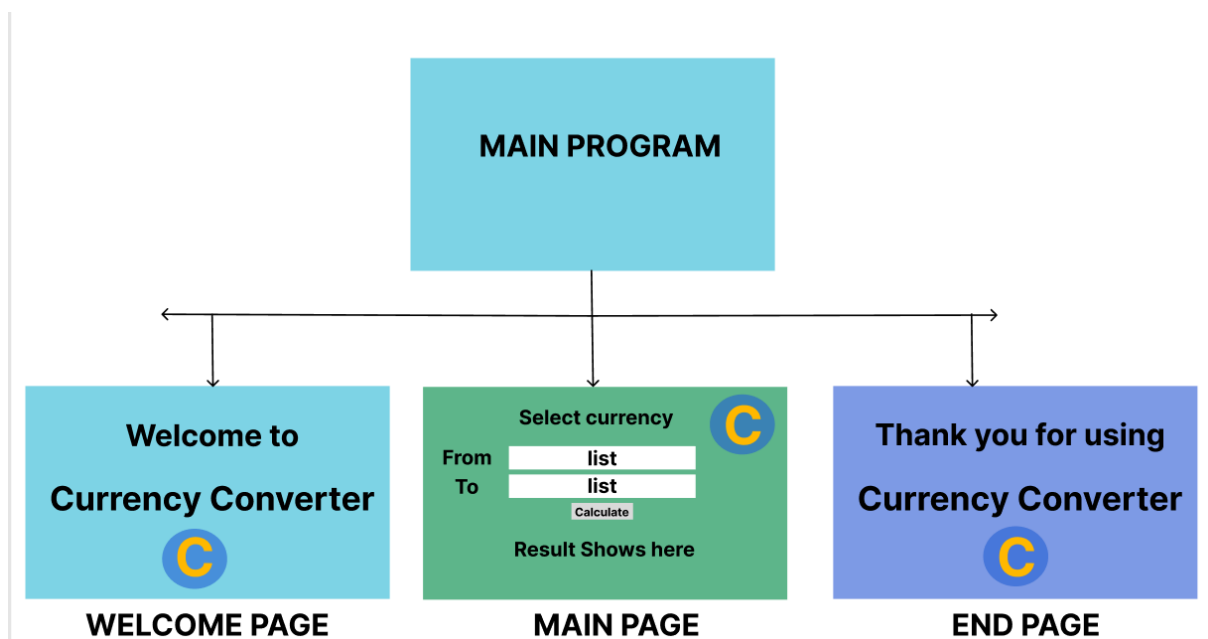
## P3 Produce a design for a computer program including:

### 1. Problem Definition statement : N/A

The travel agents considered offering a currency exchange service to make things easier for their customers. This way, it would have been simpler for travellers to handle their money during their trips, and the agents could have been a more convenient option for all their travel needs.

### 2. Proposed solution

#### 2.1. Screen Design & Layout images (at least 3 screens)



## 2.2. Data Dictionary

### 2.2.1. Page names

Screen Name	Properties	Purpose
Welcome	Windows forms	Welcome user
Main screen	Lists, button, label, windows forms	Calculate currency result
End screen	Windows forms	Thank the user for using the to

### 2.2.2. Controls

Page 1 Label
Page 2 Buttons, labels, combo box
Page 3 label

Control name	Relevant Page	Description	Purpose
Label1	3	Does nothing	Helps user navigate
Buttons	3	Directs users to different pages , generates result	Navigate different pages
Combox	1	Shows user list of currencies	Shows users what currencies they can convert from/to
Text box	1	Allows users to enter amount	Allows users to enter amount of money to convert

### 2.2.3. Variables

Variable Name	Description	Purpose
Amount	Integer, float	Store amount user enters
Exchange rate	Integer, float	Store exchange rate

## 2.3. Data Validation

Only accepting integers and floats and not letters

## 2.4. Error Handling & Reporting

1. making user aware they can't enter letters (strings)

2. making these brief and understandable makes it easier for the user to fix
3. logging these reports somewhere 😊

### 2.5. Input /Processing /Output

Screen number		Input	Processing	Output
Page 1		None	Pages	None
Page 2		currency	Calculate money	Result
Page 3		None	None	None

## 3. Algorithms

### 3.1. Pseudocode

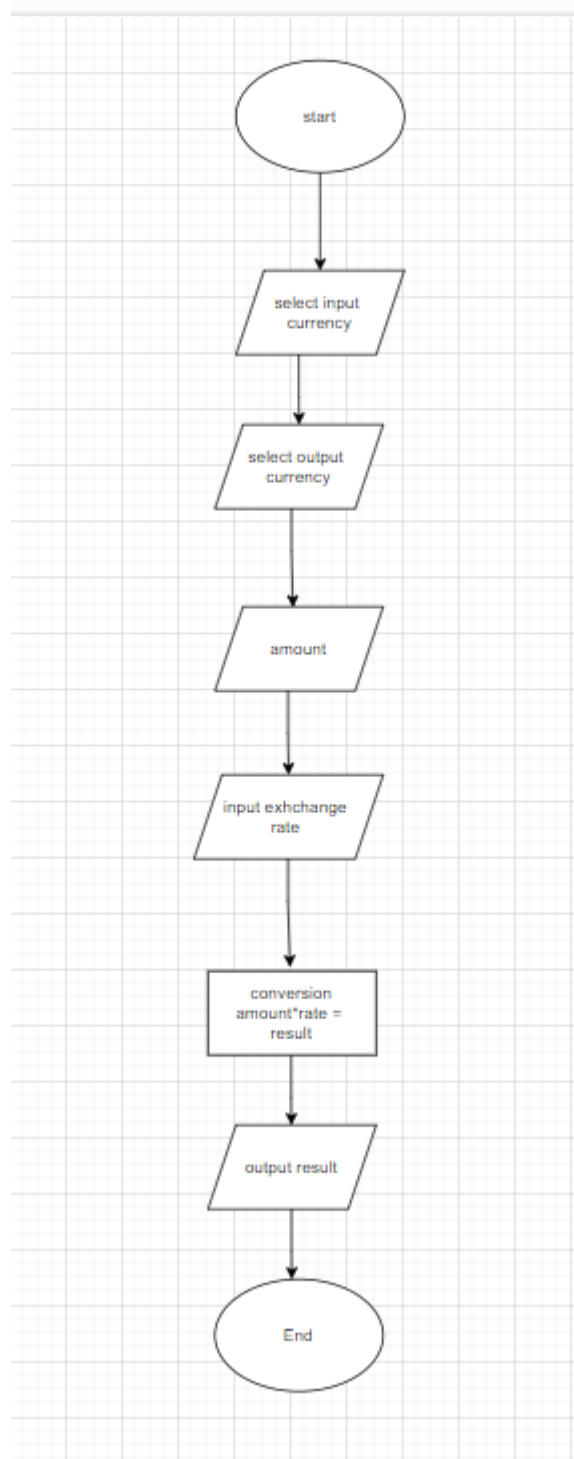
```
START

select the currency from combobox
input amount
input rate

when currency is input and rate
do amount * rate
output result

END
```

### 3.2. Flowchart



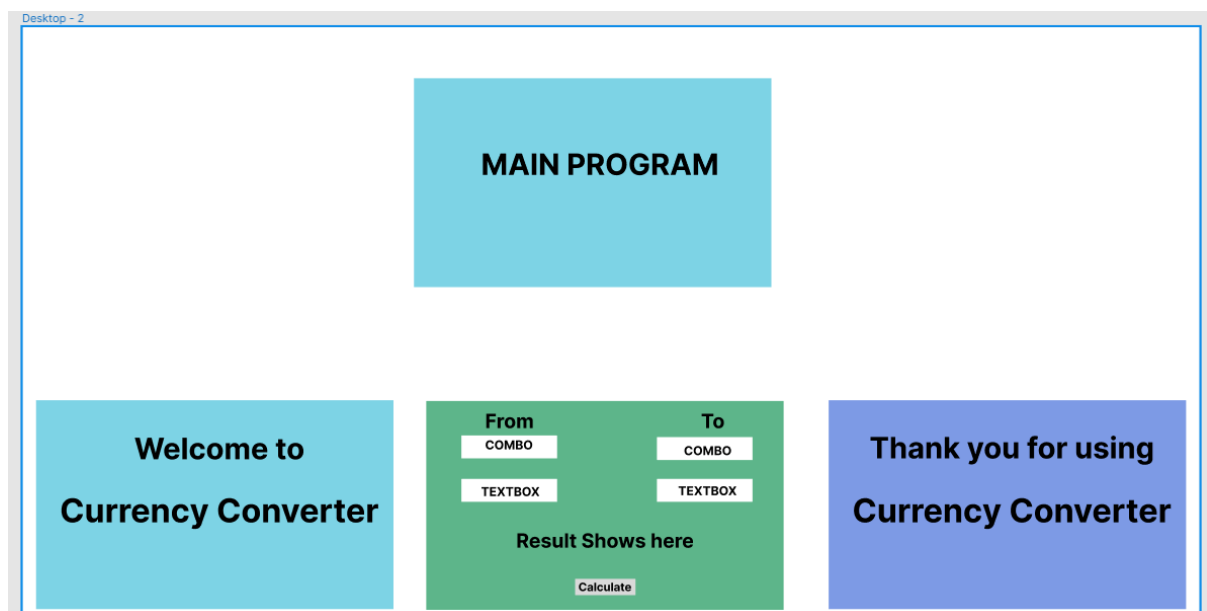
#### 4. List of predefined functions/subroutines

```
If ComboBox1.Text = "EUR" And ComboBox2.Text = "GBP" Then
Result = CDec(TextBox1.Text) * EURGBPRate
Label3.Text = "= " & Result.ToString("0.##") & " GBP  (1 EUR = " & EURGBPRate & " GBP)"
End If
```

## 5. Test Plan

Test number	Testing to see if...	Test data (if applicable)	Expected outcome	Actual Outcome	Corrective action
1	Splash screen loads	None	None	TBC	
2.	Currency convert	Numbers	Output result	TBC	

## M2 Produce a detailed alternative design for a program.



## D2 Justify the design decisions.

Describe with valid reasons which design have you decided to use to create your currency convertor program (first design in P3 or second design in M2). When you make a choice, remember that your chosen design should enhance usability, efficiency and accuracy

I have chosen this design because it's simple and doesn't need any training in order to use the program. The program simply tells the user to choose the currency and it converts it instantly when the calculate button is pressed. The logic for the currency rates is defined within the program therefore it's easier to alter the rates. Therefore, this program is useable in terms of it does what the client wants. The program is efficient because it saves time for the client as the currency is calculated and shown on the screen. The program is accurate because it is programmed to automate the task of calculating the currency output.

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## Unit 12 Software Development Assignment 2