Computing 1 – Project A Flowchart - 201086071

User enters ‘e’ or ‘d’

While not ‘e’ or ‘d’

User enters ‘e’ or ‘d’

User inputs shift value

True

False

User inputs sentence

Start main\_ programme

User ‘e’ or ‘d’ converted to lower

shift\_val\_error\_check given all inputs

sentance\_error\_check given all inputs

encrypt given s\_list, i and option

sentence\_error\_check start

s\_index = 0, s\_list = list of sentence characters

While s\_index < s\_list length or sentence = nothing

While sentence = nothing

s\_index = 0, s\_list = list of sentence characters

User inputs sentence

If index = alphabet letter

If ord number of index = 32

If index != alphabet letter and ord number != 32

s\_index = s\_index + 1

s\_index = s\_index + 1

s\_index = 0, s\_list = list of sentence characters

User inputs sentence

False

True

True

True

True

False

False

False

True

index = s\_list[s\_index]

False

False

True

i\_index = 0, i\_list = list of i characters

User inputs shift value

While i\_index < i\_list length or i = nothing

Shift\_val\_error\_check start

While i = nothing

i\_index = 0, i\_list = list of i characters

index = i\_list[i\_index]

If 49 <= ord value <= 57 or ord value = 45 

If float(i)/26 remainder = 0

User inputs shift value

i\_index = 0, i\_list = list of i characters

True

False

i\_index = i\_index + 1

i\_index = 0, i\_list = list of i characters

User inputs shift value

i = float(i)

If i > 0

i = int(remainder of i/26)

i = int(remainder of i/-26)

If i < 0

False

True

True

False

True

sentance\_error\_check given all inputs

False

Print encoded message

n = 0, result = 0, resulting\_list defined

Encrypt start

While n < length of s\_list

n = int(n), index = s\_list(n), ord\_val = int(ord(index))

If 97 <= ord\_val <= 122

If (ord\_val + shift) > 122

If 97<= (ord\_val + shift) <= 122

If (ord\_val + shift) < 97

If 65 <= ord\_val <= 90

If (ord\_val + shift) > 90

If 65 <= (ord\_val + shift) <= 90

If (ord\_val + shift) < 65

If ord\_val = 32

Result = ord\_val + shift – 26, add result to resulting\_list

Result = ord\_val + shift + 26, add result to resulting\_list

Result = ord\_val + shift + 26, add result to resulting\_list

Result = ord\_val + shift, add result to resulting\_list

Result = ord\_val + shift – 26, add result to resulting\_list

Result = ord\_val + shift, add result to resulting\_list

Add “ “ to resulting\_list

n = n + 1

Join resulting\_list to make encrypted\_sentence

If option = ‘e’

Decrypt given resulting\_list and shift value

System exit

True

True

False

False

False

False

False

False

False

False

True

True

True

True

True

True

True

True

True

Add “ “ to resulting\_list

n = 0, result = 0, resulting\_list2 defined

Decrypt start

While n < length of s\_list

n = int(n), index = s\_list(n), ord\_val = int(ord(index))

If 97 <= ord\_val <= 122

If (ord\_val - shift) > 122

If 97<= (ord\_val - shift) <= 122

If (ord\_val - shift) < 97

If 65 <= ord\_val <= 90

If (ord\_val - shift) > 90

If 65 <= (ord\_val - shift) <= 90

If (ord\_val - shift) < 65

If ord\_val = 32

Result = ord\_val - shift – 26, add result to resulting\_list

Result = ord\_val - shift + 26, add result to resulting\_list

Result = ord\_val - shift + 26, add result to resulting\_list

Result = ord\_val - shift, add result to resulting\_list

Result = ord\_val - shift – 26, add result to resulting\_list

Result = ord\_val - shift, add result to resulting\_list

n = n + 1

Add “ “ to resulting\_list

Print encoded message

Join resulting\_list to make encrypted\_sentence

System exit

True

False

False

False

False

False

False

False

False

True

True

True

True

True

True

True

True

True

Add “ “ to resulting\_list