Prac 02 Design

B, Bukanga

221005009

Problem Description

Option A:

Ask the user to input the current temperature. Use the following table to output an appropriate message to the user, depending on the temperature:

Option B

Ask the user to input firstly the distance they travelled (km) and the time it took for them to travel the distance (minutes). Calculate the average speed (km/h). If the speed is faster than 60km/h then output “Too fast” else output “The speed is valid for normal roads.”

Input and Output

Option A

Input	
Temperature	Standard input stream
Output	
Message based on temperature:	Standard output stream

Option B

Input	
Distance	Standard input stream
Time	Standard input stream
Output	
Message Based on Speed	Standard output stream

Data Format

Identifier	Data type	Description
chOption	Char	Select Character A or B for Option
IntTemp	Integer	Current Temperature
IntDistance	Integer	Distance user reach
IntTime	integer	Time spent to reach destination
DblTime_inHours	double	Conversion from minutes to hours
dblSpeed	double	Average speed of user

Pseudo Code

ChOption ← User Enter A or B

Case A

Temp ← Capture temperature

If (IntTemp < -273)

Display → “Invalid temperature value”

If (IntTemp >= -273 and < 0)

Display → “Stay indoors! You may freeze.”

If (intTemp >= 0 and < 12)

Display → “Nice and cold. Wear a jacket”

If (intTemp >= 12 and < 20)

Display → Cool and comfortable.

If (intTemp >= 20)

Display → “Getting Warmer. Wear Sunscreen”

Case B

intDistance ← Capture distance

intTime ← Capture time

dblTime_inHours ← intTime/ 60

dblSpeed ← intDistance / intTime

if dblSpeed > 60

Display → Too Fast

Else

Display → the speed is valid for normal roads.