FISIKA GERAK KONVERSI SUHU

KELOMPOK 4,
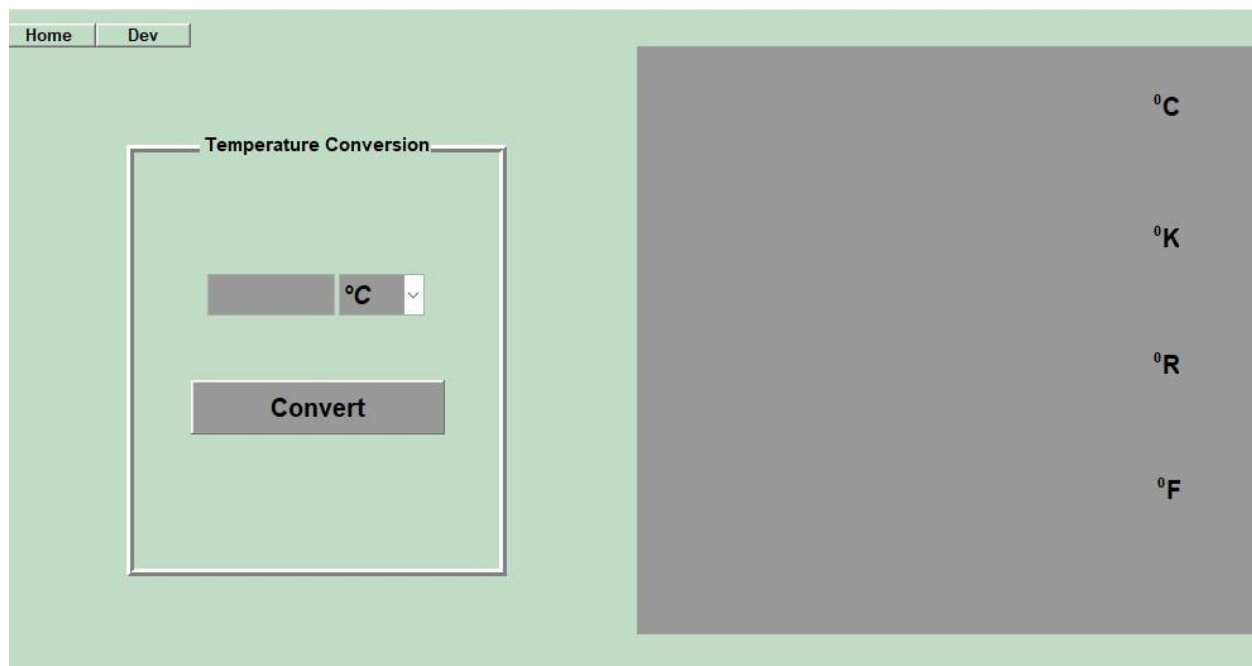
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Screenshot program :

>> Tampilan ketika pertama membuka program

>> Tampilan menu utama (Home)

>> Menghitung Celcius

>> Menghitung Fahrenheit

>> Menghitung Reamur

Home	Dev

Temperature Conversion

20	°R	∨

[Convert]

25.00	°C
298.15	°K
20.00	°R
77.00	°F

>> Menghitung Kelvin

Home	Dev

Temperature Conversion

20	°K	∨

[Convert]

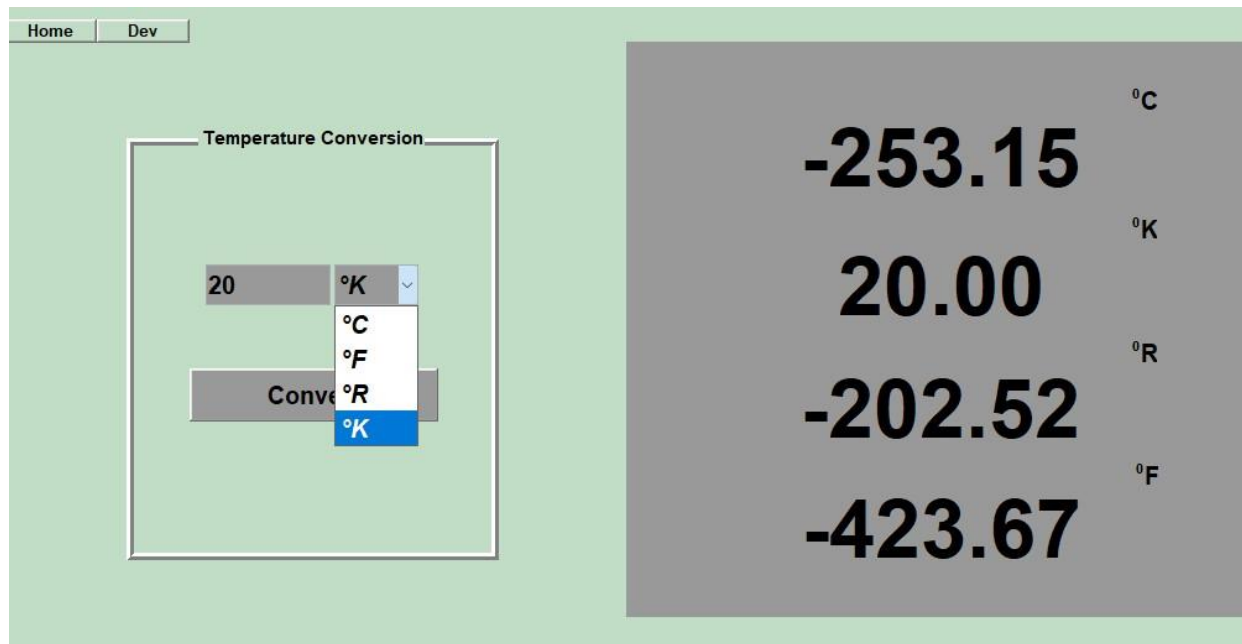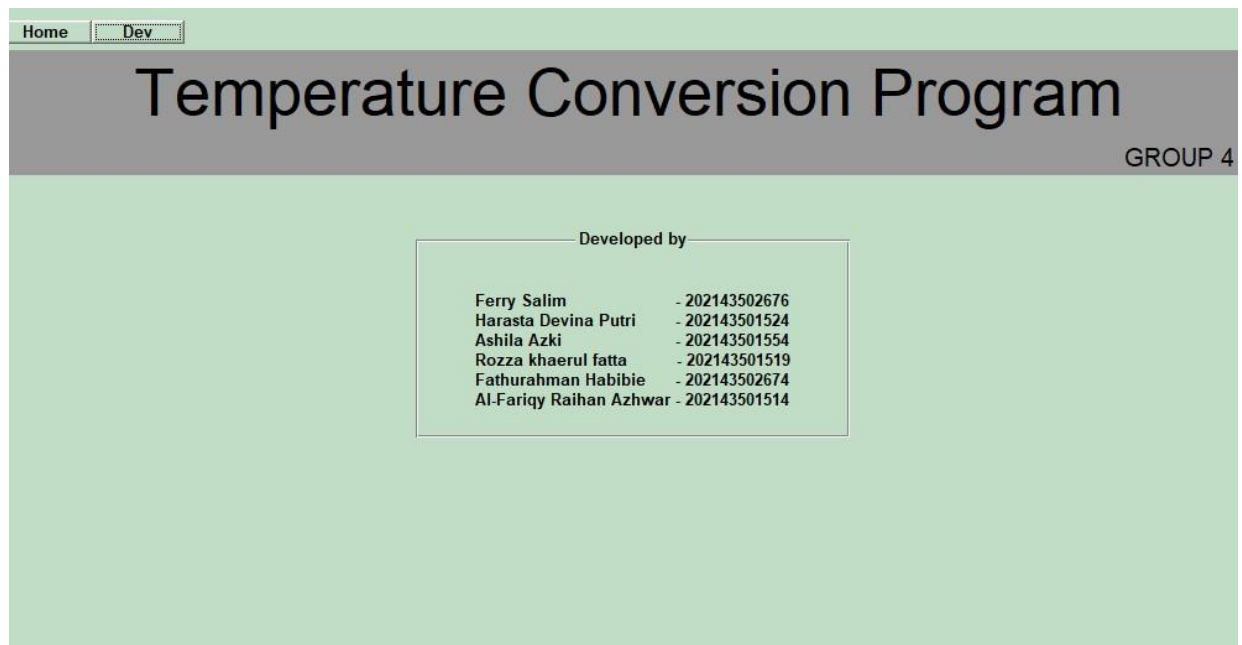|	
-253.15	°C
20.00	°K
-202.52	°R
-423.67	°F

>> Pop-up menu

>> Tampilan menu kedua (Dev)

Code program :

```matlab
function varargout = konversi_suhu(varargin)

gui_Singleton = 1; gui_State = struct('gui_Name',
mfilename, ...
                    'gui_Singleton',  gui_Singleton, ...
                    'gui_OpeningFcn', @konversi_suhu_OpeningFcn, ...
                    'gui_OutputFcn',  @konversi_suhu_OutputFcn, ...
                    'gui_LayoutFcn',  [] , ...
'gui_Callback',   []); if nargin &&
ischar(varargin{1})
    gui_State.gui_Callback = str2func(varargin{1});
end   if nargout
    [varargout{1:nargout}] = gui_mainfcn(gui_State, varargin{:}); else
    gui_mainfcn(gui_State, varargin{:});
end

function konversi_suhu_OpeningFcn(hObject, eventdata, handles, varargin)

handles.output = hObject; guidata(hObject,
handles); movegui(gcf,'center')

function varargout = konversi_suhu_OutputFcn(hObject, eventdata, handles)

varargout{1} = handles.output;

set(handles.panel3,'visible','on'); animation
=
[handles.w,handles.e,handles.l,handles.c,handles.o,handles.m,handles.e2];

for i = 1:length(animation)
set(animation(i),'visible','off');      if
i == length(animation)
pause(0.5);
        for j = 1:length(animation)
set(animation(j),'visible','on');
pause(0.2);         end;      end; end;
pause(1);
set(handles.panel3,'visible','off'); set(handles.panel1,'visible','on');
set(handles.panelnav,'visible','on');

function result = nan_prevent (value)

if logical(isnan(value));
result = 0;
else
    result = value;
end
```

```matlab
function convertion_values = temperature_convertion ( get_temperature_data,
user_choice )

    switch user_choice
case 1
            celcius_conv = get_temperature_data;
kelvin_conv = get_temperature_data + 273;
reamur_conv = (4/5) * get_temperature_data;
            fahrenheit_conv = ((9/5) * get_temperature_data) + 32;

case 2
            celcius_conv = (5/9) * (get_temperature_data - 32);
kelvin_conv = (get_temperature_data + 459.67) * 5/9;
reamur_conv = (get_temperature_data - 32) * 4/9;
fahrenheit_conv = get_temperature_data;

case 3
            celcius_conv = (5/4) * get_temperature_data;
kelvin_conv = (get_temperature_data * 5/4) + 273.15;
reamur_conv = get_temperature_data;
            fahrenheit_conv = (get_temperature_data * (9/4)) + 32;
        case
4
            celcius_conv = get_temperature_data - 273.15;
kelvin_conv = get_temperature_data;
            reamur_conv = (get_temperature_data - 273.15) * (4/5);
            fahrenheit_conv = 1.8 * (get_temperature_data - 273.15) + 32;
end;
convertion_values  = [celcius_conv, kelvin_conv, reamur_conv, fahrenheit_conv];

function btn_convert_Callback(hObject, eventdata, handles)

get_temperature_data = nan_prevent(str2double(get(handles.input_temp,
'string')));

user_choice = get(handles.popup_temp_format, 'Value');

convertion_values  = temperature_convertion(get_temperature_data, user_choice);
convertion_handles = [handles.celcius_temp, handles.kelvin_temp,
handles.reamur_temp, handles.fahrenheit_temp];

for index_convertion = 1:length(convertion_values) * 2

    if index_convertion <= length(convertion_values)

        set(convertion_handles(index_convertion), 'String', '');
else
        indexing = index_convertion - length(convertion_values);
set(convertion_handles(indexing), 'string', strcat(sprintf('%.2f',
convertion_values(indexing) )), 'visible', 'on');         pause(0.3);     end;
end;
```

```matlab
function input_temp_Callback(hObject, eventdata, handles)

function input_temp_CreateFcn(hObject, eventdata, handles)

if ispc && isequal(get(hObject,'BackgroundColor'),
get(0,'defaultUicontrolBackgroundColor'))
set(hObject,'BackgroundColor','white'); end

function popup_temp_format_Callback(hObject, eventdata, handles)

function popup_temp_format_CreateFcn(hObject, eventdata, handles)

if ispc && isequal(get(hObject,'BackgroundColor'),
get(0,'defaultUicontrolBackgroundColor'))
set(hObject,'BackgroundColor','white'); end

function home_Callback(hObject, eventdata, handles)

set(handles.panel1,'visible','on'); set(handles.panel2,'visible','off');

function dev_Callback(hObject, eventdata, handles)

set(handles.panel1,'visible','off'); set(handles.panel2,'visible','on');
```