Product requirement document for hijri/Gregorian convertor (تحويل هجري/ ميلادي) android application

# Overview

Hiri/Gregorian convertor is android application works on standard android platform 2.2 (minimum API level 8, minimum SDK version 8).

The main purpose of Hijri/Gregorian convertor is to convert a given Gregorian date to its equivalent Hijri date and vice versa.

Hiri/Gregorian convertor support English and Arabic languages. The default language is English, and if the mobile language is set to Arabic the application will automatically switch to Arabic.

When the app. Is opened, it shows the current Gregorian date as initial input date and shows its equivalent date. This is the default setting.

# GUI

The GUI consists of five sections:

1. Input date section

Here the user can enter the input date that he/she want to convert.

It consists of three input fields:

* Day (اليوم)
* Month (الشهر)
* Year (السنة)

The input values must be integer within the limitations specified in tables bellow.

|  |  |  |
| --- | --- | --- |
|  | Date type | limitation |
| Day | Hijri | 1 to 29 or 30 |
| Gregorian | 1 to 30/31 |
| Month | Hijri/ Gregorian | 1 -12 |
| year | Hijri | 2 to 9666 |
| Gregorian | 623 to 9999 |

This is the minimum and maximum input/out dates for Hijri and Gregorian dates

|  |  |  |
| --- | --- | --- |
|  | Minimum date | Maximum date |
| Gregorian | July 7,623 | December 31, 9999 |
| Hijri | Muharram 1,2 | Rabi II 3,9666 |

The Hijri and Gregorian input dates must not be less than minimum date or more than maximum date.

If the user inters wrong or out of limitation value, the wrong input value color will be changed to red, and error message will show the limitation.

|  |  |  |
| --- | --- | --- |
| Err# | Error message | |
| English | عربي |
| -1 | Year Is Out Of Range (623 to 9999) | السنة الميلادية خارج النطاق 623 - 9666 |
| -2 | Date Is Out Of Range. (MAX. Gregorian Date = December 31, 9999) | التاريخ الميلادي خارج النطاق أقصى تاريخ هو 31 ديسمبر 9999 |
| -3 | Date Is Out Of Range. (MAX. Gregorian Date = December 31, 9999) | التاريخ الميلادي خارج النطاق أقصى تاريخ هو 31 ديسمبر 9999 |
| -4 | Date Is Out Of Range. (MIN. Gregorian Date = July 7, 623) | التاريخ الميلادي خارج النطاق أدنى تاريخ هو 7 يوليو 623 |
| -5 | Date Is Out Of Range. (MIN. Gregorian Date = July 7, 623) | التاريخ الميلادي خارج النطاق أدنى تاريخ هو 7 يوليو 623 |
| -6 | Error in Month (1 to 12) | (خطأ في الشهر (من 1 إلى 12) |
| -7 | Error in Day (1 to 30/31 depends on Gregorian month) | خطأ في اليوم (من 1 إلى 30 أو 31 حسب الشهر الميلادي) |
| -8 | Please Enter Date | أدخل التاريخ إذا سمحت |
| -9 | Non Numeric Input Data | البيانات المدخلة خاطئة |
| -10 | Year Is Out Of Range (2 to 9666) | السنة الهجرية خارج النطاق 2-9666 |
| -20 | Date Is Out Of Range (MAX. Hijri Date = Rabi I 3, 9666) | التاريخ الهجري خارج النطاق أقصى تاريخ هو 3 ربيع الأول 9666 |
| -30 | Date Is Out Of Range (MAX. Hijri Date = Rabi I 3, 9666) | التاريخ الهجري خارج النطاق أقصى تاريخ هو 3 ربيع الأول 9666 |
| -40 | Date Is Out Of Range (MIN. Hijri Date = Muharram 1, 2) | التاريخ الهجري خارج النطاق أقل تاريخ هو 1 محرم 2 |
| -50 | Date Is Out Of Range. (MIN. Hijri Date = Muharram 1, 2) | التاريخ الهجري خارج النطاق أقل تاريخ هو 1 محرم 2 |
| -60 | Month Is Out Of Range (1 to 12) | خطأ في الشهر (1 إلى 12)ء |
| -70 | Day Is Out Of Range (1 to 29/30 depends on Hijri month) | خطأ في اليوم (من 1 إلى 30 أو 29 حسب الشهر الهجري)ء |
|  |  |  |
|  |  |  |

1. Conversion type section

Here the user can choose the type of conversion

It consists of two radio buttons to select the type of conversion. The types of conversions are:

* To Hijr (إلى هجري)

Convert the input date from Gregorian to Hijri.

* To Gregorian (إلى ميلادي)

Convert the input date from Hijri to Gregorian.

The user can select only one conversion type at a time. If a conversion type is selected the other will be deselected automatically.

1. Output date section

This section displays the output (converted) result date

It consists of four view/output fields:

* Day of Week (اليوم في الأسبوع)

It shows the result day of week name. (Saturday, Sunday …).

* Day (اليوم)

It shows integer value of result day of month from 1 to 29/30/31 depend on limitations.

* Month (الشهر)

Shows the name of result Hijri/Gregorian month (January, February, Ramadan …)

* Year (السنة)

Shows value result year

1. Note section

To show message to the user

English note: There is small probability of one day error

Arabic note: هناك إحتمالية خطأ بدقة يوم واحد فقط

1. Buttons section

Here the user can take two actions

* Convert (تحويل)

To convert the input date to the selected type and show the result date in the output section.

* Restore (إستعادة)

To restore to the default setting; the default setting is that the input is current Gregorian date and the conversion type is from Gregorian to Hijri, and show the result.

* Clear (مسح)

To clear all input and output fields

# Functional requirement

# Non-functional requirement

# Versioning