**Points calculation**

This is how I see this working

To be made up from 2 things:

Obscurity and time separation

The obscurity factor is straightforward in that it is the product of the obscurity values of the 2 events

So if event 1 has an obscurity value of 2 (medium) and event 2 is 3 (high) then the obscurity element of the points will be 6

The time separation is a little trickier as 50 years separation in the 11th century will seem a lot less than 50 years in the 20th century - similarly the number of events per year in my table increases over time and is heavily weighted towards the 20 century

So my approach is to use the numerical separation in the actual table rather than an absolute time separation

In other words I would use the number of rows that separate the 2 events in the events table as a percentage of the total number of rows in the events table

So perhaps a 0 to 2% separation is worth 5 points

A 2 to 5% separation is worth 4 points

A 5 to 10% separation is worth 3 points

A 10 to 20% separation is worth 2 points

A 20 to 50% separation is worth 1 point

And nothing for the rest

This is then added to the obscurity factor

So if the obscurity factor is O and the 2 individual event obscurity factors are O1 and O2 then

O = (O1 x O2)

If the time separation factor is T, the number of rows in the events table is N and the relative record number of the 2 individual events are R1 and R2 then

When ((R2 - R1) / N) x 100 < 2 T = 5

When it is > 2 and < 5 T = 4

When it is > 5 and < 10 T = 3

When it is > 10 and < 20 T = 2

When it is > 20 and < 50 T = 1

Else T = 0

And the number of points will be O + T

Ideally I would like the points and percentages held as a table so that they could be easily changed as the method is refined

**Events selection**

Initially the 2 events will be chosen by the application using whatever random method is available to you - the only valuation that I can see as necessary is to ensure that the 2 dates are not identical - there are a few in the table already

It also doesn’t matter if the player has already been presented with either of the events

As a later development we might want to introduce the ability for the player to filter the events by obscurity or category but not needed for now

**Calculation algorithm (if any) of the points that are to be deducted from the user's score when he answers incorrectly**

There is no separate calculation for deducted points - the points are calculated once the 2 random events have been selected and will be displayed along with the 2 events - so the player will know the value of the 'gamble' should they be unsure of the answer - if the player gets it right the points are added to their overall score and if they get it wrong the same number of points will be deducted from their overall score - so we need to be able to accomodate a negative score potentially