FUN WITH CALENDAR: 08

Alright guys in the previous video we have started off our coding we had define some functionalities we have just use the names check leap, check valid date will start defining them one by one. so will do with check leap functionality first so let me define it define check leap? It takes an year let me say it takes an year as an input now if it is an a century year you have to check the divisibility by four hundred otherwise you have to check the divisibility by four that is the procedure right so let's check that first. Century year as i had said the last two digits are zeros so that is they are divisible by hundred that is the check we are doing. If the year is divisible by hundred year mod hundred is equal to zero that is the case then it is the century year and hence we have to check for divisibility by four hundred divisibility by four hundred if this is equal to zero that is it is divisible by four hundred then you just say return true, true that it is a leap year that is it's a century year and it divisible by four hundred hence it is a leap year so you return true else that is the check for divisibility by four hundred fails in that cast it is not a leap year so you should return false aright and now this is the procedure if this is a century year. If it is not a century year so that comes under the else part if this particular condition divisibility by hundred fails what if they input is two thousand four it's not divisible by hundred so this will fail so here we have to go ahead with checking for divisibility by four so will do that if year mod is equal to zero then you return true that is it is a leap year else if it is not divisible by four for example an input like two thousand seven would fall under this category return false that is not a leap year. So the logic is if it is century year you should check for divisibility by four hundred otherwise you should check for divisibility by four. So let us trace through some inputs. If it is thousand eight hundred that is eighteen hundred is the year at is pass to it so eighteen hundred mod zero is mod hundred is zero eighteen hundred is a century year so you check for divisibility by four hundred eighteen hundred mod four hundred is not equal to zero so its comes under else part and it is false that is eighteen hundred is not a leap year yes it is true. It works fine, what is the input is two thousand, two thousand mod hundred is zero yes ok its comes inside two thousand mod four hundred is zero yes it returns true it says two thousand is a leap year which is true. What if the imput is two thousand sixteen? Two thousand sixteen mod hundred is not equal to zero so it comes into this else part it checks for divisibility by four two thousand sixteen mod four is equal to zero so it says true yes two thousand sixteen is a leap year is what it says which is true. If you are input is two thousand nine two thousand nine mod zero sorry two thousand nine mod hundred is not equal to zero so it comes into the else part it checks for divisibility by four two thousand nine mod four is not equal to zero so it comes into the else part and returns false. If says two thousand nine is not a leap year, yes it is true. So for all possible inputs this thing works fine so we have correctly coded the mechanism by which we can check if a given year is a leap year or not? So we are done with check leap see the warning symbol has vanished there is just one warning symbol for check valid date it involves this four factors so we will see that in the next part of the video.