-) Prime check and Prime Factorization 53

-> Brute Force Method to check prime.

-> Time Complexity O(N)

```
BOOL PRINCHECK ( INT m)
       BOOL IS PRIME = TRUE;
       -, 39 m is I return Julye as 1 is a
       non-pringe number
       3F ( n == 1)
         RETURN FALSE;
       FOR (3N7 1=2; i< 7; i++)
          3F (n:1: == 0)
          RETURN FALSE;
        RETURN TRUE;
-> But we can observe a pattern here, just like
in finding divisors, we could use or n till
 sarz (n), here we can do the same,
 because if a number is divisible by a
 number coming before sorr(n), it will
 automatically be divisible by numbers coming afterwards.
 -> eq: For n= 36
  -> 2 -> 36/2 == 18 ( so if a number
 5 3 → 36/3 == 12 divisible by 2, it will
   4 - 36 4 == 9
```

	Date
	-> 6 -> 36/6 == 6
.N076	-> Square Root Method to check Prime -> Square Root Method to check Prime -> Time Complexity O(3027 (m)) OR O(5m)
	BOOL SORT PRIME CHK (2N7 M)
	BOOL 35 PRIME = PRUE; -) 3/ m is I teturn balse as I is
	RETURN FALSE;
	3 - 1 - 2 - 1 - 2 - 2 - 2 - 2 - 2 - 2 - 2
	FOR (347 i = 2; i*i < m; i++) { 3F (m : i == 0)
0.7	RETURN FALSENS
	REJURN TRUE;
	-> Prime Factors:
This was	Approach: First we have to gind the smallest prime number of a given no and then we keep on dividing that
Section 1	

of with that frime number, until its is no more divisible, now we have to find this new n's prime number, and Jollow the game process until on becomes 1. -> Brute Force Approach -> June Complexity O(m) PRIME FACT B; -, As in prime factorization, we always consider the smallest possible prime number which is divisor of n, so, He use on till socr(n), because if a number is distisible by a number coming before goar (n), it will automatically be divisible This will work fine until He have n composite, but as , he get in a prime no , we have to apply an if check, be if n= 3, then sar (3) condition will

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not wa	rk.			ha.	Mactor
-> Square	Root	Method	Por	tomic	Jacos
? Pinse	complex	Method city 0	LSORT	(m))	OR C
\$ 100 miles	53	O	1 1.000	11/100	0.10
िला	1 100	The service	1912 1	12 1	
3N3 77;		2,00	cd4.0	Force	ative E
-				1/	
(30 >>			17		J. j
VECTOR <	345 > KR	IME FAC)	
FOR (3M		j* i <			
1 1/2,4%					
MHITE	(89 m	71. i==	0)	* PUE	Carr
	- A	1:0	s j	0=1-51	مدلوعا
	RZME FA	107-3. PB	(i);		
~	1=14	· (n =	= 1 1.5	n 1 21	raid
3					
}	E, e	(1) 89	A STA	i in and	
3F (n	>1)		100		
5	100	man 1 mm.		1	
002.4	c .coc	001	- Can 1.	and the same	1
} KKIM	E-FACT-	3. PB (~	٦);	Same I have derived	