Date:- 2/6/20

Name:- Harshitha.T

Course:- Digital design using HDL

USN:- 4AL17EC106

Topic:- FPGA Basics.

Sem & Sec:- 6th 'B'

* FPGA is an integrated ckt that consists of internal hardware blocks with user-programmable interconnects to customize operation for a specific application.
* FPGA has its roots in earlier devices such as programmable read only memories.
* FPGA stores its configuration information in a re-programmable medium such as (SRAM) or flash memory.
* FPGA uses:-
  - → The ability to configure the hardware of the FPGA or reconfigure it when needed & optimize it for a particular set of functions
  - → FPGAs are often used to provide a custom solution in situations in which developing an ASIC would be too expensive or time consuming.
* FPGA Applications:-
  - → rely on the parallel execution of identical operations; the ability to configure
  - → A good example of FPGA use is high-speed search:- Microsoft is using FPGAs in its datat centers to run Bing search algorithm.

* FPGA history

→ With these emerging application the FPGA market is growing at a healthy clip. It was valued more in 2016

→ Exponential growth of data & the emergence of fast charging feild such as AI machine learning, HPC etc.

* HDL (Hardware description Language)

→ It has 3 abstractions

- Behavioural level
- Register - transfer level
- Gate level.

Date:- 2/6/22
Course:- python
Topic:- Application7

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Sem & Sec:- 6th B

* Useage of while loop.
  → while loop does the exactly same as that of 'if statement' does, but instead of running the code block once, they jump back to the starting point of the procedure.

Syntax:- while expression

* In python "for loops" are called iterators. Just like while loop, for loop is also repeated the same
* Breakpoint is unique function in for loop that allows you to break or terminate the execution of the for loop.

Ex:-
```
# month = ["Jan", "Feb", "Mar", "April", "May", "Jun"]
# for m in months:
# print m
for x in rang(10,20):
if (x==15): break
# if (x%2==0): continue
print(x).
```

* In this example we declared the no. from 10-20, but we want that loop to terminate at number 15 and stop executing further, so we have included the break function by defining (x == 15) : break
* In the same way how to use continue function is also learnt
* continue funt^n as the name ~~det~~ indicates, will terminate the current itteration of the for loop but will continue execution of the remaining iterations