Flutter Course

1.variable and data type

```
var a=4;
  //a="hi";
  print(a);

  var n;
  n=4;
  n="hi";
  print(n);

  final h=1;
  //h=6;
  print(h);

  const k=6;
  //const k=h;
print(k);

dynamic j=6;
j="hi";
print(j);

var  n= 2;//int
var n2=3.2;//double
num n3=2;//both int ,double
n3 +=2.5;//now it will be double
print(n3);
print(n2);

double nn=1;//1.0
//nn  + = 2.5;
print(nn);

//convert from string
var j= int.parse('1');//to int
//convert to string
String oneto=1.toString();//"1"
//convert to double
var jj=double.parse('1.1');
//double to string
String bistring= 3.1415.toStringAsFixed(2);//3.14 2digt after .
print(j);
print(oneto);
print(jj);
print(bistring);

//string with ""","
var s1 ='nnn';
var s2 ="nnnn";
print(s2);
var s3= 'It\'s even ';
var s4= "It\'s even ";
print (s3);
print(s4);

//get value exp inside string
var f ='hi';
var f2='$f Nor';
print(f2);

var f3 ='${f.toUpperCase()} nor';
print(f3);
```

2.Datastructure (list, set, map)

```
//list
  var list =[1,2,3];
  list. Length;//3
  list[1];//2
  list[1]=7;
  print(list);
  //const list
 var list2=const[1,2,3];
 //list2[1]=7;//not work const
 print (list2);
 //append
 var list3=[0,...list];
 print(list3);


 ///sets {}unoreder
 var set1={'flu','chl','bro'};
 print (set1);
 //empty set
 var set2=<String>{};
 set2.add('nnn');
 //add set to set
  set2.addAll(set1);
 print(set2);

 ///maps key:value
 var gift={
   //key:value
   'n':'hellow',
   'r':'mine'
 };
 var gift2=Map<String,String>();
 gift2['n2']='hellow';
 gift2['r2']='mine';

 print(gift2);


  var gift3=Map<int,String>();
  gift3[1]='hellow';
  gift3[2]='mine';

  print(gift3);
  print(gift3.length);
  //access element
 print(gift3[1]);
```

3.nullsafty

```
//null saftey
  var k=2;//int
  var kk='jjj';//string
  //?to null
  int? kkk=null;
  print(kkk);

  String? a;
  //ckeck 2>1
  if (2>1)
    {
      a='123';
    }
  //a is null at begin then in if it will be 123
   print(a!.length);

  //late
  late String aa;
  if (1>0)//true condition
  {
    aa='123';
  }
  else
    {
      aa='123456';
    }

print (aa.length);
```

4.Funcation

```
void hello()
{
  print('hello session');
}


//required,required named parameter,optional
//1required
int sum(int a,int b){
  return a+b;
}
//named required
int multiply({required int a,required int b}){
  return a*b;
}
//optional
double divide([int a=2,int b=1]){
  return a/b;
}
```

6 scope

```
bool outsidemain = true; // define outside call it anwhelre
void main() {
  //iside call it in main only
  var insidemain = true;

//lexical scope
  void funcation() {
    //call it in fucation only
    var insidefuncation = true;

    //funcation inside funcation
    void nestedfun() {
      var insidenest = true;
      outsidemain;
      insidefuncation;
      insidenest;
    }
  }

//insidefuncatiom;//notworlk
  insidemain; //work well

  //call makaddin main
  var add1 = makeAdder(2);
  add1(3); //add 2 to the input 3
  print(add1(3));
}

//funcation outsidemain
Function makeAdder(int addBy) {
  //anonymosfuncation >no name like lambada in python
  return (int i) => addBy + i;
}
```

7 operators

```
//operator
 int a=0,b=1;
 a++;//1 add 1to0
 a+b;//2
 a==b;//print true
 print( a ==b);//false

 //arithmetic op
 2+3;//5
 3-2;//1
 5/1;//5
 5%2;//1 remider of division


 int c=1;
 int v,g;
 v=0;
 g=++v;//increment before
 g==v;//1==1


 g=v++;//increment after
 g==v;//1=!0


 //the same sutrct-

 //equall operator
 2==2;//true
 2!=5;//true
 7>=5;//true
 //test operator
 //2 is int;//true
// 3 as String;//error false
```

8 controlflow&loop&switchcase

```
//if else

if (10>4)
  {print ('10 is big');}
 else if(7==10)
   {print('7 equal 10');}
else{
  print('5 not equal 10');
}
```

```
//loop

var books=['arabic','english','french'];

for (var i=0;i<books.length;i++)
  {
    print(books[i]);
  }

//while loop
int num=0;
while(num<10){
  if(num%2==0){
    print(num);
  }
  num++;
}

//do while
int i=10;
do {
  print(i);
  i++;
}
//false print do
while(i>=20);
{
  print("terminate");
}
}
```

```
//break,containue

print('n');
int i = 0;
while (i < 4) {
  if (i == 2) {
    break;
  }


  print('$i');
  i++;
}
```

```
//contnos

while (i < 4) {
  if (i == 2) {
    i++;
    continue;
  }


  print('$i');
  i++;
}
```

```
//switchcase
  var grade="n";
  switch(grade){
    case "A":{print("excellent");}
    break;
    case "B":{print("good");}
    break;
    case "c":{print("fair");}
    break;

    default:{print("notfound");}
    break;
  }
```