DY
Dekmouche youcef

خلية
كلية
العلوم
الدقيقة

ملخص شامل للغة

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التعليمات الشرطية
Conditional Instructions

if - else if - else

```
if(<condition1>) {
<statement1>;
}
else if(<condition2>{
<statement2>;
}
else {
<statement3>;
}
```

switch - case

```
switch(<expression>){
case <constant1>;
<statement1>;
break;
case <constant2>;
<statement2>;
break;
default:
<defaultstatement>;
}
```

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السلاسل النصية

message loops

Initialization

```
char myStr[3] = {'h', 'i', '\0};
or
char myStr[] = "hi";
```

Useful Functions

```
strcpy(s1, s2);
strcat(s1, s2);
strlen(s1);
strcmp(s1, s2);
strchr(s1, ch);
strstr(s1, s2);
```

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المصفوفات
Matrices

Declaration

```
type arrayName [arraySize] ;
```

Initialization

```
type arrayName [arraySize] = {value1, value2};
```

Accessing Elements

```
type varName = arrayName[index];
(index goes from 0 to arraySize-1)
```

Matrix (2D Arrays) Declaration

```
type matrixName[rows][columns];
```

Matrix (2D Arrays) Initialization

```
type matrixName[lr][c] = {{v1, v2}, {v3, v4}}
```

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رؤوس الملفات
header files

<setjmp.h>	Jump functions
<time.h>	Date time functions
<locale.h>	Localization functions
<math.h>	Mathematics functions
<ctype.h>	Character type functions
<string.h>	String handling functions
<signal.h>	Signal handling functions
<stdlib.h>	Standard Utility functions
<stdarg.h>	Variable arguments handling
<assert.h>	Program assertion functions
<stdio.h>	Standard Input/Output functions

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الحلقات
Loops

While

```
while(<condition>){
<statement>;
}
```

Do - While

```
do{
<statement>;
} while(<condition>);
```

For

```
for(sinitialize>; <condition>; <update>){
<statement>;
{
```

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أنواع البيانات

Types of data

Built-in

int
char
float
double

Type modifiers

long
short
signed
unsigned

Derived

array
pointer
function
reference

User defined

union
structure
enumeration

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المؤشرات و المراجع
References and pointers

Pointer

```
int* n1 = &n2;
```

Reference

```
int &n3 = n4;
```

Dereference

```
int n = 3;
//Pointer
int* pointer = &n;
//Dereference
int dereference = *pointer;
```

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المشغلات
Operators

Arithmetic

Division: /
Addition: +
Modulus: %
Subtraction: -
Increment: ++
Decrement: - -
Multiplication: *

Relational

Equal To: =
Less Than : <
Greater Than: >
Not Equal To: !=
Less Than or Equal To: <=
Greater Than or Equal To: >=

Logical

OR: ||
NOT: !
AND: &&

I/O

Input: scanf();
Ex: scanf("%d", &a);
Output: printf();
Ex: printf("%d", a);

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