ECE160 Exam 1 Cheat Sheet

by codebrent2 via cheatography.com/19647/cs/2624/

Must-Know

int	-2,147,483,648 to +1,147,48-3,647
float	4bytes,contain 1 digit/decimal, +-10^38, 7digitsprecision,f, illegalfloats: 6.2.2f,6.-3f,6.2
double	8bytes,+-10^308,14digitp-recise
variable	upper/lowercase differ, reflects data stored, given to memory location
destructive read	Reference
destructive write	Write Over
types of c statements	declarations/arithmetic instru-ctions/control instructions
Order of Operations (L->R)	!, * / %, + -, < > <= =>, == !=, &&, ||, =
Functions	AND (&&), OR (||), NOT (!)
QuadFo-rmula	(-b+sqrt((b*b)-4ac))/(2a)
While Loop	executed 0 or more times. Does test, then body
Do-While Loop	executed 1+ times. Does body, then test
absolute value	abs(#)

Formatting Printf

```
printf("%6d",123);
printf ("%0 3d",5);
printf ("%7.2f " ,6.7 89);
```

OUTPUTS WITHOUT SPACES
output: _ _ _ 1 2 3
output: 005
output: _ _ _ 6 . 7 9

Do While Loop (b)

```
i=5;
do
{
printf(i);
i++;
}
while( i>3);
```

Executed 1+ times. Output: 5

While Loop (b)

```
k=7;
while( k<5)
{
printf ("%d ", k);
k++;
}
```

Executed 0+ times. Output: (nothing)

Switch-Case

```
int dc;
scanf( "%lf", dc);
switch(dc) //can only switch a
non double/non float
{
case 0 : printf ("switch case
statement 1");
break;
case 1 : printf ("s witch case
statement 2");
break;
default; //do default case,
below this line
printf ("D EFAULT CASE");
break;
}
```

Logical If

```
If(logical expression)
{
//block of code
}
else
{
//stat ement if false
}
```

For Loop (a)

```
for(i=0;i<10;i++) //INIT, TEST,
LOOP ALTER
{
printf ("%d ",i); //BODY
}
```

Rewrite of While Loop (a)

While Loop (a)

```
i=0; //INIT
while( i=0); //TEST
{
printf ("%d ",i); //BODY
i++; //LOOP ALTER
}
```

Rewrite of For Loop (a)

Pyramid Code Snippet

```
for(r=0;r<7;r++) //outer: 7 rows
{
for(s= 0;s <r;s++) //controls
spaces
{
printf (" ");
}
for(a= 0;a <__ __* r;a++) //MATH
{
printf ("*"); //controls stars
}
```

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Pyramid Math

r	# stars
0	11
1	9

1) Find m: m=(y2-y1)/(x2-x1)
2) Find equation: b=y=mx
3) Use equation in blank in code
*y=ANSWER

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