

JAVA

FONDAMENTI DI INFORMATICA

VARIABILI

0	1	0	0	0	0	0	1
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0	1	1	0	0	0	0	1
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1	1	0	0	0	0	1	0
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1	1	1	0	0	0	1	1
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0	1	0	0	0	1	0	0
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0	1	1	0	0	1	0	0
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nomeDellaVariabile

DICHIARAZIONE DI VARIABILI

```
int nomeDellaVariabileIntera;
```

DICHIARAZIONE DI VARIABILI

```
int nomeDellaVariabileIntera = 10;
```

DICHIARAZIONE DI VARIABILI

Non posso dichiarare due variabili
con lo stesso nome!

ERRORE

```
int nomeDellaVariabileIntera = 10;  
int nomeDellaVariabileIntera = 11;
```

DICHIARAZIONE DI VARIABILI

```
[public|protected|private] [static] [final] Tipo identificatore [= value];
```


PAROLE RISERVATE

Parole che non possono essere usate come identificatori

abstract	continue	for	new	switch
assert	default	goto	package	synchronized
boolean	do	if	private	this
break	double	implements	protected	throw
byte	else	import	public	throws
case	enum	instanceof	return	transient
catch	extends	int	short	try
char	final	interface	static	void
class	finally	long	strictfp	volatile
const	float	native	super	while

TIPI DI VARIABILE

Il **tipo** di una variabile indica **cosa** può contenere una variabile



TIPI PRIMITIVI

Tipo	Dimensione	Valori	Default
byte	8 bit	$[-128, 127]$	0
short	16 bit	$[-2^{15}, 2^{15}-1]$	0
int	32 bit	$[-2^{31}, 2^{31}-1]$	0
long	64 bit	$[-2^{63}, 2^{63}-1]$	0L
float	32 bit	Virgola mobile	0.0f
double	64 bit	Virgola mobile	0.0d
boolean	Dipende da VM	true/false	false
char	16 bit	Unicode	U+00

PROMOZIONE

Promozione : in una variabile primitiva posso inserire il contenuto di un'altra primitiva, se di dimensioni minori e di tipo compatibile.

```
byte numeroPiccolo = 1;  
int numeroGrande = numeroPiccolo;
```

Meglio evitare!

CASTING

Casting : posso convertire un tipo di variabile verso un'altra, anche a capacità minore

```
long numeroGrandeGrande= 1000*1000*1000;  
int numeroMenoGrande = (int) numeroGrandeGrande;
```

Lo si fa a proprio rischio e pericolo!

OPERATORI ARITMETICHE

- Somma: +
- Sottrazione: -
- Moltiplicazione: *
- Divisione: /
- Resto della divisione: %

OPERAZIONI ARITMETICHE

```
int addendoUno = 9 + 1;
```

```
int addendoDue = 10;
```

```
addendoDue = addendoUno + addendoDue;
```

OPERAZIONI ARITMETICHE

```
int addendoUno = 9 + 1;  
int addendoDue = 10;  
addendoDue += addendoUno;
```


OPERAZIONI ARITMETICHE

```
int addendo = 10;  
addendo = addendo + 1;  
addendo += 1;  
addendo++;
```

OPERAZIONI DI CONFRONTO

Operatore	Descrizione	Espressione	Risultato
>	Maggiore	$x > y$	true se $x > y$
>=	Maggiore uguale	$x \geq y$	true se $x \geq y$
<	Minore	$x < y$	true se $x < y$
<=	Minore uguale	$x \leq y$	true se $x \leq y$
==	uguale	$x == y$	true se x uguale a y
!=	diverso	$x != y$	true se x diverso da y