

Widening and Narrowing

- This process is related to conversion of datatype into data item
- Storing the data of smaller size datatype into a larger size datatype is called **WIDENING** this process is done automatically by the compiler
- The datatype in widening must be compatible , that is the source must be smaller or equal to the destination
- Widening is also called **UPCASTING**
- If these two points are not satisfied then widening must be done explicitly means by ourself this process is called **NARROWING**
- This occur when source data is larger that destination data size
- An example of this is float value cannot be stored in integer value but integer can be stored inside float
- Narrowing is also called **DOWN CASTING**

- The data type which are compatible with each other is given below, source is in right hand side, destination is on left hand side

	byte	short	int	long	float	double	char	boolean
byte	✓	✓	✓	✓	✓	✓	✗	✗
short	✗	✓	✓	✓	✓	✓	✗	✓
int	✗	✗	✓	✓	✓	✓	✓	✗
long	✗	✗	✗	✓	✓	✓	✗	✗
float	✗	✗	✗	✗	✓	✓	✗	✗
double	✗	✗	✗	✗	✗	✓	✗	✗
char	✗	✗	✓	✓	✓	✓	✓	✗
boolean	✗	✗	✗	✗	✗	✗	✗	✓