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PREMETIVE DATA TYPES

Byte to short

```
public class Hello {  
    public static void main(String args[]){  
        byte a = 10;  
        short b;  
        b=a;  
        System.out.println(b);  
    }  
}  
  
// no error  
// output : 10  
// Implicit conversion
```

Byte to char

```
public class Hello {  
    public static void main(String args[]){  
        byte a = 65;  
        char b;  
        //b=a; gives error cannot convert char to byte  
        b=(char)a;  
        System.out.println(b);  
    }  
}  
  
// output : A  
// Explicit conversion
```

Byte to int

```
public class Hello {  
    public static void main(String args[]){  
        byte a = 10;  
        int b;  
        b=a;  
        System.out.println(b);  
    }  
}  
  
// output : 10  
// Implicit conversion
```

Byte to float

```
public class Hello {  
    public static void main(String args[]){  
        byte a = 10;  
        float b;  
        b=a;  
        System.out.println(b);  
    }  
}  
  
// output : 10.0  
// Implicit conversion
```

Byte to long

```
public class Hello {  
    public static void main(String args[]){  
        byte a = 10;  
        long b;  
        b=a;  
        System.out.println(b);  
    }  
}  
  
// output : 10  
// Implicit conversion
```

Byte to double

```
public class Hello {  
    public static void main(String args[]){  
        byte a = 10;  
        double b;  
        b=a;  
        System.out.println(b);  
    }  
}  
  
// output : 10.0  
// Implicit conversion
```

Byte to boolean

```
public class Hello {  
    public static void main(String args[]){  
        byte a = 10;  
        boolean b;  
        b=a; // error  
        b=(boolean)a; // error  
        System.out.println(b);  
    }  
}  
  
// conversion not possible
```

Short to byte

```
public class Hello {  
    public static void main(String args[]){  
        short a = 10;  
        byte b;  
        //b=a; // error  
        b=(byte)a;  
        System.out.println(b);  
    }  
}  
  
// output : 10  
// Explicit conversion
```

Short to char

```
public class Hello {  
    public static void main(String args[]){  
        short a = 65;  
        char b;  
        //b=a; // error  
        b=(char)a;  
        System.out.println(b);  
    }  
}  
  
// output : A  
// Explicit conversion
```

Short to int

```
public class Hello {  
    public static void main(String args[]){  
        short a = 65;  
        int b;  
        b=a;  
        System.out.println(b);  
    }  
}  
  
// output : 65  
// IMplicit conversion
```

Short to float

```
public class Hello {  
    public static void main(String args[]){  
        short a = 65;  
        float b;  
        b=a;  
        System.out.println(b);  
    }  
}  
  
// output : 65.0  
// IMplicit conversion
```

Short to long

```
public class Hello {  
    public static void main(String args[]){  
        short a = 65;  
        long b;  
        b=a;  
        System.out.println(b);  
    }  
}  
  
// output : 65  
// IMplicit conversion
```

Short to double

```
public class Hello {  
    public static void main(String args[]){  
        short a = 65;  
        double b;  
        b=a;  
        System.out.println(b);  
    }  
}  
  
// output : 65.0  
// IMplicit conversion
```

Short to boolean

```
public class Hello {  
    public static void main(String args[]){  
        short a = 65;  
        boolean b;  
        b=a; // ERROR  
        b=(boolean)a; // ERROR  
        System.out.println(b);  
    }  
}  
  
// conversion not possible
```

Char to byte

```
public class Hello {  
    public static void main(String args[]){  
        char a = 'a';  
        byte b;  
        // b=a; // ERROR  
        b = (byte)a;  
        System.out.println(b);  
    }  
}  
  
// output : 97  
// Explicit conversion
```

Char to short

```
public class Hello {  
    public static void main(String args[]){  
        char a = 'a';  
        short b;  
        // b=a; // ERROR  
        b = (short)a;  
        System.out.println(b);  
    }  
}  
  
// output : 97  
// Explicit conversion
```

Char to int

```
public class Hello {  
    public static void main(String args[]){  
        char a = 'b';  
        int b;  
        b=a;  
        System.out.println(b);  
    }  
}  
  
// output : 98  
// Implicit conversion
```

Char to float

```
public class Hello {  
    public static void main(String args[]){  
        char a = 'b';  
        float b;  
        b=a;  
        System.out.println(b);  
    }  
}  
  
// output : 98.0  
// Implicit conversion
```

Char to long

```
public class Hello {  
    public static void main(String args[]){  
        char a = 'b';  
        long b;  
        b=a;  
        System.out.println(b);  
    }  
}  
  
// output : 98  
// Implicit conversion
```

Char to double

```
public class Hello {  
    public static void main(String args[]){  
        char a = 'b';  
        double b;  
        b=a;  
        System.out.println(b);  
    }  
}  
  
// output : 98.0  
// Implicit conversion
```

Char to boolean

```
public class Hello {
    public static void main(String args[]){
        char a = 'b';
        boolean b;
        b=a; // ERROR
        b=(boolean)a; // ERROR
        System.out.println(b);
    }
}

// conversion not possible
```

Int to byte

```
public class Hello {
    public static void main(String args[]){
        int a = 10;
        byte b;
        // b=a; // ERROR
        b=(byte)a;
        System.out.println(b);
    }
}

// output 10
// Explicit conversion
```

Int to short

```
public class Hello {
    public static void main(String args[]){
        int a = 10;
        short b;
        // b=a; // ERROR
        b=(short)a;
        System.out.println(b);
    }
}

// output 10
// Explicit conversion
```


Int to char

```
public static void main(String args[]){
    int a = 65;
    char b;
    // b=a; // ERROR
    b=(char)a;
    System.out.println(b);
}

// output A
// Explicit conversion
```

Int to float

```
public class Hello {
    public static void main(String args[]){
        int a = 65;
        float b;
        b=a;
        System.out.println(b);
    }
}

// output 65.0
// Implicit conversion
```

Int to long

```
public class Hello {
    public static void main(String args[]){
        int a = 65;
        long b;
        b=a;
        System.out.println(b);
    }
}

// output 65
// Implicit conversion
```

Int to double

```
public class Hello {
    public static void main(String args[]){
        int a = 65;
        double b;
        b=a;
        System.out.println(b);
    }
}

// output 65.0
// Implicit conversion
```

Int to boolean

```
public class Hello {
    public static void main(String args[]){
        int a = 65;
        boolean b;
        b=a; // error
        b=(boolean)a; // error
        System.out.println(b);
    }
}

// conversion not possible
```

Float to byte

```
public class Hello {
    public static void main(String args[]){
        float a = 65;
        byte b;
        // b=a; // error
        b=(byte)a;
        System.out.println(b);
    }
}

// output : 65
// Explicit conversion
```

Float to short

```
public class Hello {  
    public static void main(String args[]){  
        float a = 65;  
        short b;  
        // b=a; // error  
        b=(byte)a;  
        System.out.println(b);  
    }  
}  
// output : 65  
// Explicit conversion
```

Float to int

```
public class Hello {  
    public static void main(String args[]){  
        float a = 65;  
        int b;  
        // b=a; // error  
        b=(int)a;  
        System.out.println(b);  
    }  
}  
// output 65  
// Explicit conversion
```

Float to char

```
public class Hello {  
    public static void main(String args[]){  
        float a = 65f;  
        char b;  
        // b=a; // error  
        b=(char)a;  
        System.out.println(b);  
    }  
}  
// output A  
// Explicit conversion
```

Float to long

```
public class Hello {
    public static void main(String args[]){
        float a = 65f;
        long b;
        // b=a; // error
        b=(long)a;
        System.out.println(b);
    }
}
// output 65
// Explicit conversion
```

Float to double

```
public class Hello {
    public static void main(String args[]){
        float a = 65f;
        double b;
        b=a;
        System.out.println(b);
    }
}
// output 65.0
// Implicit conversion
```

Float to boolean

```
public class Hello {
    public static void main(String args[]){
        float a = 65f;
        boolean b;
        b=a; // error
        b=(boolean)a; // error
        System.out.println(b);
    }
}
// conversion not possible
```

Long to byte

```
public class Hello {  
    public static void main(String args[]){  
        long a = 65;  
        byte b;  
        //    b=a; // error  
        b=(byte)a;  
        System.out.println(b);  
    }  
}  
// output 65  
// Explicit conversion
```

Long to short

```
public class Hello {  
    public static void main(String args[]){  
        long a = 65;  
        short b;  
        //    b=a; // error  
        b=(short)a;  
        System.out.println(b);  
    }  
}  
// output 65  
// Explicit conversion
```

Long to char

```
public class Hello {
    public static void main(String args[]){
        long a = 65;
        char b;
        //    b=a; // error
        b=(char)a;
        System.out.println(b);

    }
}
// output A
// Explicit conversion
```

Long to int

```
public class Hello {
    public static void main(String args[]){
        long a = 65;
        int b;
        //    b=a; // error
        b=(int)a;
        System.out.println(b);

    }
}
// output 65
// Explicit conversion
```

Long to float

```
public class Hello {
    public static void main(String args[]){
        long a = 65L;
        float b;
        b=a;
        System.out.println(b);

    }
}
// output 65.0
// Implicit conversion
```

Long to double

```
public class Hello {  
    public static void main(String args[]){  
        long a = 65L;  
        double b;  
        b=a;  
        System.out.println(b);  
    }  
}  
  
// output 65.0  
// Implicit conversion
```

Long to boolean

```
public class Hello {  
    public static void main(String args[]){  
        long a = 65L;  
        boolean b;  
        b=a; // error  
        b=(boolean)a; // error  
        System.out.println(b);  
    }  
}  
  
// conversion not possible
```

Double to byte

```
public class Hello {  
    public static void main(String args[]){  
        double a = 65;  
        byte b;  
        // b=a; // error  
        b=(byte)a;  
        System.out.println(b);  
    }  
}  
  
// output 65  
// Explicit conversion
```

Double to short

```
public class Hello {  
    public static void main(String args[]){  
        double a = 65;  
        short b;  
        // b=a; // error  
        b=(short)a;  
        System.out.println(b);  
    }  
}  
// output 65  
// Explicit conversion
```

Double to char

```
public class Hello {  
    public static void main(String args[]){  
        double a = 65;  
        char b;  
        // b=a; // error  
        b=(char)a;  
        System.out.println(b);  
    }  
}  
// output A  
// Explicit conversion
```


Double to int

```
public class Hello {  
    public static void main(String args[]){  
        double a = 65;  
        int b;  
        // b=a; // error  
        b=(int)a;  
        System.out.println(b);  
    }  
}  
// output 65  
// Explicit conversion
```

Double to float

```
public class Hello {  
    public static void main(String args[]){  
        double a = 65;  
        float b;  
        // b=a; // error  
        b=(float)a;  
        System.out.println(b);  
    }  
}  
// output 65  
// Explicit conversion
```

double to long

```
public class Hello {  
    public static void main(String args[]){  
        double a = 65;  
        long b;  
        // b=a; // error  
        b=(long)a;  
        System.out.println(b);  
    }  
}  
// output 65  
// Explicit conversion
```

Double to boolean

```
public class Hello {
    public static void main(String args[]){
        double a = 65;
        boolean b;
        // b=a; // error
        b=(boolean)a; // error
        System.out.println(b);

    }
}
// conversion not possible
```

Boolean to byte

```
public class Hello {
    public static void main(String args[]){
        boolean a = true;
        byte b;
        b=a; // error
        b=(boolean)a; // error
        System.out.println(b);

    }
}
// conversion not possible
```

Boolean to short

```
public class Hello {
    public static void main(String args[]){
        boolean a = true;
        short b;
        b=a; // error
        b=(boolean)a; // error
        System.out.println(b);

    }
}
// conversion not possible
```

Boolean to char

```
public class Hello {  
    public static void main(String args[]){  
        boolean a = true;  
        char b;  
        b=a; // error  
        b=(boolean)a; // error  
        System.out.println(b);  
    }  
}  
// conversion not possible
```

Boolean to int

```
public class Hello {  
    public static void main(String args[]){  
        boolean a = true;  
        int b;  
        b=a; // error  
        b=(boolean)a; // error  
        System.out.println(b);  
    }  
}  
// conversion not possible
```

Boolean to float

```
public class Hello {  
    public static void main(String args[]){  
        boolean a = true;  
        float b;  
        b=a; // error  
        b=(boolean)a; // error  
        System.out.println(b);  
    }  
}  
// conversion not possible
```

Boolean to long

```
public class Hello {  
    public static void main(String args[]){  
        boolean a = true;  
        long b;  
        b=a; // error  
        b=(boolean)a; // error  
        System.out.println(b);  
    }  
}  
// conversion not possible
```

Boolean to double

```
public class Hello {  
    public static void main(String args[]){  
        boolean a = true;  
        double b;  
        b=a; // error  
        b=(boolean)a; // error  
        System.out.println(b);  
    }  
}  
// conversion not possible
```

CONVERSION TABLE

	byte	short	char	int	float	Long	double	boolean
byte	CNR	IMC	EXC	IMC	IMC	IMC	IMC	CNP
Short	EXC	CNR	EXC	IMC	IMC	IMC	IMC	CNP
char	EXC	EXC	CNR	IMC	IMC	IMC	IMC	CNP
int	EXC	EXC	EXC	CNR	IMC	IMC	IMC	CNP
float	EXC	EXC	EXC	EXC	CNR	EXC	IMC	CNP
long	EXC	EXC	EXC	EXC	IMC	CNR	IMC	CNP
double	EXC	EXC	EXC	EXC	EXC	EXC	CNR	CNP
boolean	CNP	CNP	CNP	CNP	CNP	CNP	CNP	CNR

CNR -> CONVERSION NOT REQUIRED

IMC -> IMPLICIT CONVERSION

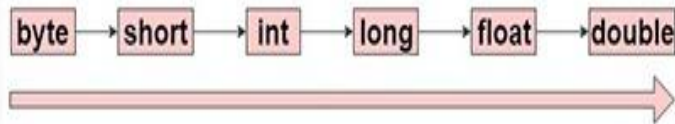
EXC -> EXPLICIT CONVERSION

CNP -> CONVERSION NOT POSSIBLE

TYPECASTING

in **JAVA** programming

Automatic Type Conversion
(Widening - implicit)



Narrowing
(explicit)

