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/*
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 * Classnote: Sample #5 for 2301171 tutorial (Distant Learning Program)
 * Description: This program illustrates the use of function in C.
 */

#include    <stdio.h>

/*
 * function prototype
 */
void      sub1(int);
int       sub2(int);
void      sub3(int *);

int
main(void)
{
    int    ret, num;

    num = 5;
    printf("current value of 'num' is: %d\n", num);
    sub1(num);
    printf("after sub1, current value of 'num' is: %d\n", num);
    ret = sub2(num);
    printf("after sub2, current value of 'num' is: %d\n", num);
    printf("after sub2, the value of 'ret' is: %d\n", ret);
    sub3(&num);
    printf("after sub3, current value of 'num' is: %d\n", num);
    return 0;
}

/*
 * parm receives a copy of the value stored in 'num' from 'main'.
 */
void
sub1(int parm)
{
    parm = 20;
}

/*
 * parm receives a copy of the value stored in 'num' from 'main',
 * but returns a new value separately through the returned mechanism.
 */
int
sub2(int parm)
{
    parm = 30;
    return parm / 2;
}

/*
 * parm receives the actual value (not a copy) of 'num' from 'main'.
 */
void
sub3(int *parm)
{
    *parm = 24;
}

```