Praktikum 8 (1/4)

POINTER

Untuk setiap program di bawah ini,

- **gambarkan ilustrasi alokasi memori dari setiap baris pernyataan yang diproses**
- **perkirakan hasil eksekusinya**

1.
```
main(){
   int y, x = 87;
   int *px;

   px = &x;
   y = *px;

   printf("Alamat x    = %p\n", &x);
   printf("Isi px      = %p\n", px);
   printf("Isi x       = %d\n", x);
   printf("Nilai yang ditunjuk oleh px = %d\n", *px);
   printf("Nilai y     = %d\n", y);
  }
```

2.
```
main(){
     float *pu, nu;
     double u = 1234.0;

     pu = &u;
     nu = *pu;

     printf("Alamat dari u = %p\n", &u);
     printf("Isi pu        = %p\n", pu);
     printf("Isi u         = %lf\n", u);
     printf("Nilai yang ditunjuk oleh pu = %f\n", *pu);
     printf("Nilai nu      = %f\n", nu);
  }
```

3.
```
main(){
   float d = 54.5f, *pd;

   printf("Isi d mula-mula = %g\n", d);

   pd = &d;
   *pd += 10;

   printf("Isi d sekarang  = %g\n", d);
 }
```

4.
```
main(){
    int z = 20, s = 30, *pz, *ps;

    pz = &z;
    ps = &s;
    *pz += *ps;
    printf("z = %d\n", z);
    printf("s = %d\n", s);
}
```

5.
```
main(){
    char c = 'Q', *cp = &c;

    printf("%c %c\n", c, *cp);
    c = '/';
    printf("%c %c\n", c, *cp);
    *cp = '(';
    printf("%c %c\n", c, *cp);
}
```

6.
```
main() {
    int x = 1, y = 2, *ip;

    ip = &x;
    y = *ip;
    *ip = 3;

    printf("x = %d, y = %d", x, y);
}
```

7.
```
main(){
    int i1, i2, *p1, *p2;

    i1 = 9;
    p1 = &i1;
    i2 = *p1 / 2 - 2 * 3;
    p2 = p1;

    printf("i1=%d,i2=%d,*p1=%d,*p2=%d\n",i1,i2,*p1,*p2);
}
```

8.
```
main() {
    int  count = 10, *temp, sum = 7;

    temp = &count;
    *temp = 32;
    temp = &sum;
    *temp = count;
    sum = *temp * 4;

    printf("count=%d, *temp=%d, sum=%d\n", count,*temp, sum );
}
```

9.
```
main(){
   int  count = 13, sum = 9, *x, *y;

   x = &count;
   *x = 27;
   y = x;
   x = &sum;
   *x = count;
   sum = *x / 2 * 3;

   printf("count=%d, sum=%d, *x=%d, *y=%d\n", count,sum,*x,*y);
}
```

10.
```
int r, q = 7;
int go_crazy(int *, int *);

main(){
   int *ptr1 = &q;
   int *ptr2 = &q;

   r = go_crazy(ptr1, ptr2);
   printf("q=%d, r=%d, *ptr1=%d, *ptr2=%d\n",q,r,*ptr1,*ptr2);

   ptr2 = &r;

   go_crazy(ptr2, ptr1);
   printf("q=%d, r=%d, *ptr1=%d, *ptr2=%d\n",q,r,*ptr1,*ptr2);
}

int go_crazy(int *p1, int *p2){
    int x = 5;

    r = 12;
    *p2 = *p1 * 2;
    p1 = &x;
    return *p1 * 3;
   }
```