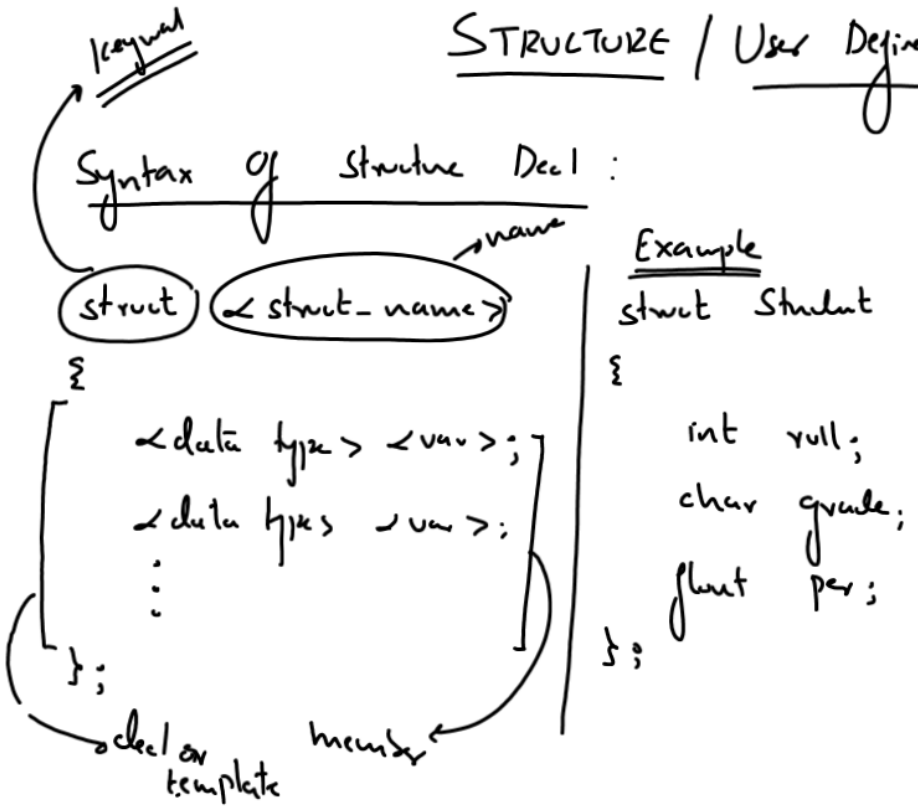
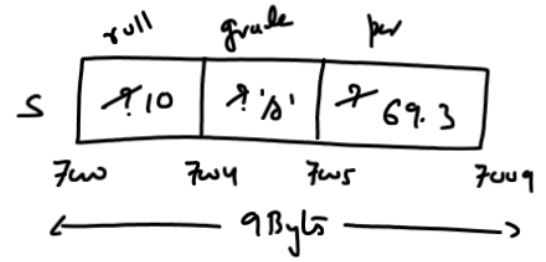
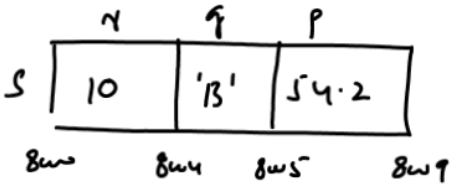
STRUCTURE / User Defined Data Type




```
struct Student
{
    int roll;
    char grade;
    float per;
};

int main()
{
    struct Student S;
    S.roll = 10;
    S.grade = 'A';
    S.per = 69.3;
    printf("Roll = %d, Grade = %c, Per = %f", S.roll,
                                    S.grade, S.per);
    return 0;
}
```

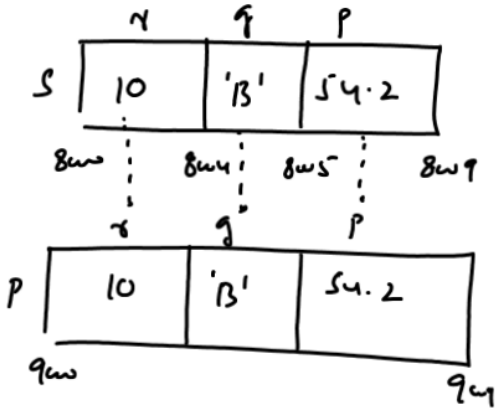


ACCEPTING INPUT FROM USER IN STRUCTURE



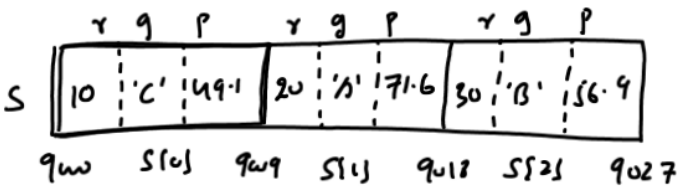

```
#include <stdio.h>
struct Student
{
    int roll;
    char grade;
    float per;
};
int main()
{
    struct Student S;
    printf("Enter roll,grade and per:");
    scanf("%d %c %f",&S.roll,&S.grade,&S.per);
    printf("Roll=%d,Grade=%c,Per=%f",S.roll,S.grade,S.per);
    return 0;

}
```

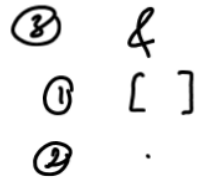
COPYING ONE STRUCTURE VAR TO ANOTHER




```
#include <stdio.h>
struct Student
{
    int roll;
    char grade;
    float per;
};
int main()
{
    struct Student S,P;
    printf("Enter roll,grade and per:");
    scanf("%d %c %f",&S.roll,&S.grade,&S.per);
    P.roll=S.roll;
    P.grade=S.grade;   OR   P = S;
    P.per=S.per;
    printf("Roll=%d,Grade=%c,Per=%f",S.roll,S.grade,S.per);
    return 0;
```

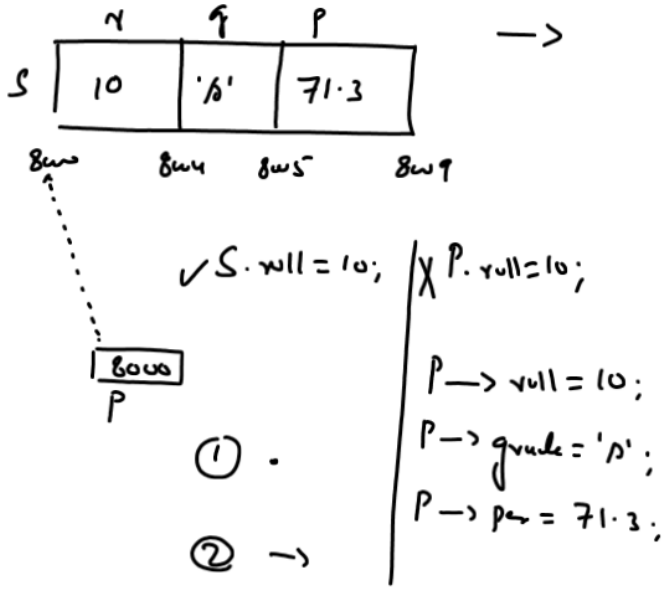
CREATING ARRAY OF STRUCTURE





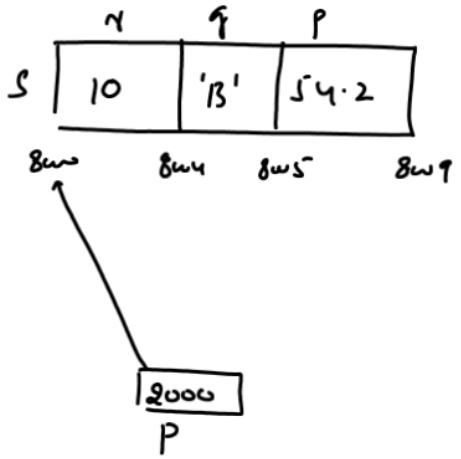

```
#include <stdio.h>
struct Student
{
   int roll;
   char grade;
   float per;
};
int main()
{
   struct Student S[3];
   int i;
   for(i=0;i<3;i++)
  {
   printf("Enter roll,grade and per:");
   scanf("%d %c %f",&S[i].roll,&S[i].grade,&S[i].per);
   }
   for(i=0;i<3;i++)
  {
   printf("\n%d %c %f",S[i].roll,S[i].grade,S[i].per);
   }

   return 0;

}
```

STRUCTURE AND POINTER



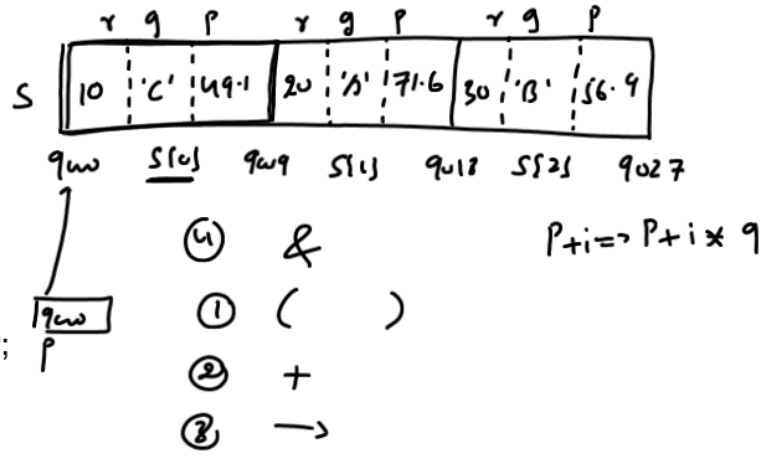

```
#include <stdio.h>
struct Student
{
   int roll;
   char grade;
   float per;
};
int main()
{
   struct Student S;
   struct Student *P;
   P=&S;
   P->roll=10;
   P->grade='A';
   P->per=71.3;
   printf("Roll=%d,Grade=%c,Per=%f",P->roll,P->grade,P->per);
   return 0;}
```

ACCEPTING INPUT FROM USER IN STRUCTURE USING POINTER




```
#include <stdio.h>
struct Student
{
    int roll;
    char grade;
    float per;
};
int main()
{
    struct Student S,*P;
    P=&S;
    printf("Enter roll,grade and per:");
    scanf("%d %c %f",&P->roll,&P->grade,&P->per);
    printf("Roll=%d,Grade=%c,Per=%f",P->roll,P->grade,P->per);
    return 0;

}
```

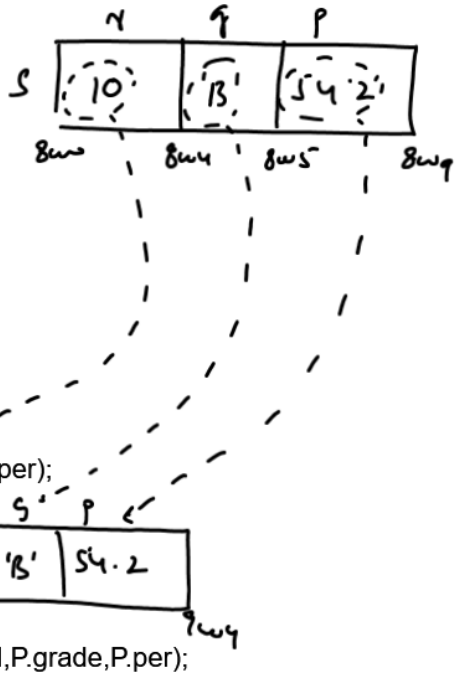
ACCESSING ARRAY OF STRUCTURE USING POINTER




```
#include <stdio.h>
struct Student
{
    int roll;
    char grade;
    float per;
};
int main()
{
    struct Student S[3],*P;
    int i;
    P=S;
    for(i=0;i<3;i++)
   {
    printf("Enter roll,grade and per:");
    scanf("%d %c %f",&(P+i)->roll,&(P+i)->grade,&(P+i)->per);
    }
    for(i=0;i<3;i++)
   {
    printf("\n%d %c %f",(P+i)->roll,(P+i)->grade,(P+i)->per));
    }

    return 0;
```

STRUCTURE AND FUNCTION

```
#include <stdio.h>
struct Student
{
    int roll;
    char grade;
    float per;
};
void display(struct Student);
int main()
{
    struct Student S;
    printf("Enter roll,grade and per:");
    scanf("%d %c %f",&S.roll,&S.grade,&S.per);
    display(S);
    return 0;
}
void display(struct Student P)
{
   printf("Roll=%d,Grade=%c,Per=%f",P.roll,P.grade,P.per);
}
```




```
#include <stdio.h>
struct Student
{
    int roll;
    char grade;
    float per;
};
void display(struct Student);
void accept(struct Student *);

int main()
{
    struct Student S;
    accept(&S);
    display(S);
    return 0;
}
void accept(struct Student *P)
{
   printf("Enter roll,grade and per:");
   scanf("%d %c %f",&P->roll,&P->grade,&P->per);
}
```

```
void display(struct Student P)
{
   printf("Roll=%d,Grade=%c,Per=%f",P.roll,P.grade,P.per)
}
```