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```
#include <stdio.h>
```

```
#include <stdlib.h>
```

```
struct Node
```

```
{
```

```
    int val;
```

```
    struct Node *next;
```

```
};
```

```
struct Node *InsertProduct(struct Node *product);
```

```
struct Node *PriceChanges(struct Node *product);
```

```
void PrintPriceChanges(struct Node *priceDiff);
```

```
int main(){
```

```
    int choice;
```

```
    struct Node *product;
```

```
    struct Node *priceDiff;
```

```
    do{
```

```
        printf("*****\n");
```

```
        printf("1) Create yearly price for the product\n");
```

```
        printf("2) Display yearly price changes for the product\n");
```

```
        printf("3) Exit\n");
```

```
        printf("What would you like to do? ");
```

```
        scanf("%d",&choice);
```

```
        printf("*****\n");
```

```
        if(choice==1)
```

```
            product =InsertProduct(product);
```

```

        else if(choice==2){
            priceDiff = PriceChanges(product);
            PrintPriceChanges(priceDiff);
        }
        else if(choice!=3)
            printf("Please enter a valid number!\n");

    }while(choice!=3);

    return 0;
}

```

```

struct Node *InsertProduct(struct Node *product){
    product = (struct Node *)malloc(sizeof(struct Node));
    product->next=NULL;
    struct Node *tmp, *tail;
    tail = product;

    int num_years, i, price;
    printf("How many years? ");
    scanf("%d",&num_years);

    printf("Enter prices for the product: ");
    for(i=0;i<num_years;i++){
        scanf("%d",&price);

        tmp = (struct Node *)malloc(sizeof(struct Node));
        tmp->next=NULL;
        tmp->val=price;
        tail->next=tmp;
        tail=tmp;
    }
}

```

```

    }

    printf("Prices for the product is created successfully!\n");

    return product;
}

```

```

struct Node *PriceChanges(struct Node *product){
    struct Node *tmp=product->next;
    struct Node *priceDiff, *temp, *tail;

    priceDiff = (struct Node *)malloc(sizeof(struct Node));
    priceDiff->next=NULL;
    tail=priceDiff;

    while(tmp->next){
        temp = (struct Node *)malloc(sizeof(struct Node));
        temp->next=NULL;
        temp->val= tmp->next->val-tmp->val;
        tail->next=temp;
        tail=temp;

        tmp=tmp->next;
    }

    return priceDiff;
}

```

```

void PrintPriceChanges(struct Node *priceDiff){
    printf("Changes per year are as follows:\n");
    int i=1;
    struct Node *temp=priceDiff->next;

```

```
while(temp){
    if (temp->val>0)
        printf("Year %d: Price increased %d tl\n",i,temp->val);
    else if (temp->val<0)
        printf("Year %d: Price decreased %d tl\n",i,abs(temp->val));
    else
        printf("Year %d: Price didnt change!\n",i);

    temp=temp->next;
    i++;
}
}
```