```
1. Write a program to some the
  propiem using greedy Algorithm.
import Sava. util. Arrays;
import sava. util. Comparator,
class Item {
     Int vame, weight;
  Pablic Item ( int value, int weight)
                           Tima reginimentes
       this. Vanue = varue;
      this weight = weight;
   y
 Public class Knepsaek (
4
    Public static void main (string[7 angs) {
      int capacity = 50%
      item () items = { new = tem (60, 10),
                    new Iron (100, 20),
                         new Item (120, 30), ];
    double value = Krupsaux (items, capacity);
    System. out. printin ("Maximum Knopsack value + moxvalue);
 Public Static Did Knop Sack (Itom () itoms, int capacity)
   Arrays. Sort ( items, Comparater LItem > () {
                compare (Irom itom 1, itom 2) {.
       6 anyoc
       double varior ] = (double) 1tm ] . value / item . coeight,
```

ration 2 (double) item 2, value / intem2, weight;

I MOST I MAR THINK I TO ME

```
return Double. Compart. (ratio2, vario1);
   477
       corrent beight 201
      double tobal value = 0;
   for (Item item: items)4
      if (congent weight + item. weight L2 capacity) L.
        Convent weight += item. weight;
        torai vaine + : item·vaine;
       I cise 4
       double remaining Capacity = capacity - Corrent Weight;
     toral vame = (remaining capacity (item. everyth) & item. value,
       pricak;
     Y
    return botal veure;
 4
Output 1-
 Maximum value in Knowpsack = 240.0
2. Write a program to some Fractional Knowsalk
   problem using Greedy approach.
             MATE 19 MATE MAZ) TUMPOS
                    ingli (siduos) e. Inordy
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Java. Oth . Aways;
imart
       Jora . wii . Commercion;
MIKAL
Public chase Fractional Krepsace L.
   Stanic case Trems.
      int profit, weight;
     Papile Irem ( int propit, int weight)?
       this . profit = profit;
        this. I weight a coverant;
 Public static double get Maxvauc Etremes items, int caracitus,
   Arrays. sort (items, citems, items) -> Paulse. comparecedantes)
     From 2. Propit / items. weight, (double) items. profit/items. excigni).
    duble toralvaille =0'
    Per CIrcm item: trems) f
      int current weight = item. weight)
                                   Will find the total
      int convent value = irem. profit;
      if ( capacity - current caright >=012
        caracity -= current weight;
        total value + = convent value;
       double Praction = (double) eapacites/conventueight;
      y cuel
      Lotar value += (correntvalue * fraction);
      capacity = 01
       breaks - - many ment of my
     Y
   return total value.
Public static void main (String C) arast /.
      Items , items = 2. new Irem (60, 10),
                       now I fam Cio, 20)1.
                         non 1 tow ( 50 ' 301 77 ).
```

```
· Manufra Million
                int camain 250)
         dans max vaire = get, Maxvaire (items; capacity);
        System. Out. printin ("Maxi morn value in Knopsacu = + masana);
                                                                                                      : minu (terry Mr.
         7
                                                                Tropy of some intomate Mines
  I
output :-
         Maximum vanue in Knipsaen = 85.0
 3. Nonte a program to some son Securencia.
      deadine using greedy Algorithms and a wife
                                                     The said and in the said the s
(Int in a smill for a smill (strack) million smill interior compare
 Class Job {
                                                               English mest = Inglish the eyes and
               Char Id;
               int dead line, profit is an interesting the
    Public 5000 Lig / de deadline, int profit ) ?
            this. id 2 di
                                                                TO LOV TENDE + + SURVICES
           Enis deadline = deadline;
             this . Profit : Profit; : voust : moissing
 void print Job Scheduing (Array List 2 Job) arr, int ()/
        int naamsize()).
       Conections. Sort (am, ca,b)-) b. Profit - a. profit)
       boolean result () = new boolean(+))
        char $000 = now char(E);
     Porling is or, i'm; Itt 12,2 later.
                  for lint i = Math. min(t-1, am-get(i), deadine-1)
```

1>=0; 1--)

```
if (resalt [i] == faise) }
          resalt [ s] = Erue;
         SobCi] = am. gercij·id;
         breaky
      ecnor. Sp. 30b). 2011Am one of the sail man win
  4
        SOP ( Jothiman); But day while, in promise - with this
   sop cli }
 Public Static void main (string angs[]) {.
   Array List < 5007 am = new Array List < Jobs (7)
  on. add (new Job ( 10, 2, 160));
   an. add ( new 500 ( 'b), 1, 100 ));
  ar. add c rew Job ( Cc', 2, 27 ));
   arr. add ( new Job ( ) 1 25)1;
  36P (" Following is maximum profit seauence of John");
  Job Sob - new Jobeli
    job. Print JobScheduling (arr, 3) il 1900 1900
 Following is Muximum Profit securence OF sobs
output in
                         100 1 wo 1 0 132 +211 Vine
  ca e.
4. Write a program to Aind
tree using prims Algorithm.
```

```
import. Joua. 10. #1
 import. Java. lang . #;
 ccase MST L.
  Privave static final Int v=5; UNO-of vortices.
 int min Kay (int KayE), Boolean msiScrC) 2
 in min - Inveger. MAX-VALUE, min_idex = -13
 for (int v=0; V<V; v+t)
    ie (mstset [v] == fauz et keury] ¿min)?
                    rowA count not cost and throng
        min = Key CV];
                            ( por ) det war) bos iso
       min_index = V)
                           Mary our representations
 return min index in
                            int groph CIC3) (
void print MST Lint Parant (), i
b
  Sop (" Edge Vor height?) in marine de l'action to 700
 Por lint 1=1; iEV 1 it+)
    SOP (Pament Ci]+ "-" + " (L" + Graph [i] (Parent (i));
void PrimMET(Int Graph (SC))
   int power() ? new int [v];
   int Key () = new ind Civi)
  Bookan met Ser () 2 new Bookean (V),
 For (int i= 0; i LV; int ) \
     Key (1) = Integer. MAX_VALUE;
     ms+Set Cis = Paux)
    Kon [0] = 0;
    parent Co] = -1/
 for (int count 20; count 2V-I; count+++) {.
```

```
int U = minkay (Kay, mut Set);
     mst Scie Co] = tocie;
   Percint 1=01 NTA: N++),
      if (graphco][v] 1= 0 4f ms+ Scr (v) =: fauc Afgranco (v)
            < Key [v]){
       Parient [V] = U)
        Kod CLS = BackCazCAJ;
   Print MST ( parent, graph);
public static void main (string (2 orgs) (
    MST E = now MST():
   int Oraph() () = new in+()() { {0,2,0,6,04,
                                22,0,3,8,5%
                               20,3,0,0,731
                             66,8,0,0,0,0,0,
                              1660,6,7,07
   t- primMST (grapy);
output :-
                weight
  Edge C
 0-1
```