Aryan Agarwal, 190530005 (i) A technique in C++ that allows no to curitie inline functions without a name. (a) (i) The return type of lamba expressions can be neglected in some cases. (iii) 3 (0) # include LiostTeam? is the trans (d)# include <functional> # include <algorithm> # include < vector> using namespace std; int mean 11 of victor <: 1 > V = 2 7,53,6,-10,10} Sort (v. begin(), v. end(), [] (const int sa, const int sb) Totom a>b; for (const auto sx: V) cout << x < < end); . retrom 0;

POPL Assignment: 4

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(e) # in clude <iostream>
   # include < functional>
   # include < algorithm>
   A include Evectors
   owing namestace std;
             int main () 5
        Veton cits v = of 1,2,3,4,5,6,7,8/9,
        int count = count_if (v. begin(), v. end,
                     [] (int x) of netrous x7.2==0; 4);
       cont 22 count 22 endl;
         notrom 0;
    # include Liottream>
(F)
    # include (functional)
   wing namentace Std;
   int main () S
           int X=0
          auto make one = [s]. () of x=1; 4;
            make_one();
            cout << xcc endl;
            return 0;
```

include <ipytream> namespace std; class TownOf Hanoid publici void operator () (int n, chair f, chao aux, chart) of if (nco) suturi; if (n==0) (100 1) Cout 20" Moure disc! from " { { « "to'x t << endly inenter (this)(n+, 6, t, aux); Cout a "Move disc" a nee "from" a f a "to" exterendly (*this) (nd, aux, f, t); int main Da Toward Hano: ti Coutec "Entor no of discs: Ch >> n', //Rods * t(n, 'A', 'B', (C')); return 0;

 $\bar{\mathcal{S}}(\rho)$ ## include < functional> wing namespace Std; int main() S std: function< void (int, char, char, char)>TowarOftanoi Tower Of Hanoi: [s Tower Of Hanoi] (int n, charf, char aux, char the if (nco) return; if (n==1) S cout e "Move disc! from " < f & "to " & t << end) & Tetion; Towar of Manoi (n1, f, t, aux); cout & "Move disc's x in ce "from'exfec" to 'ex tecendly Tower OfHanoi (n1, aux, f, t); cout <2 "Enter No. of diss"; Cinson, Tower Of Hangi (n, 'A', 'B', C'); //Rods are A, B, C io menter

include <i 0xtream>

redude < jostream> vamespace std; does Pormute S ·public : & (if his , 2 guirts) () roteredo biou if (2>= 7) & cout cesceendl; return; for (int i= l; comic= n; i++) S Suap (s(2), s(i)); (* this) (s, l +1, 27); Swap (sce], s[i]) Int main () of Cout « "Enter string Storing s; Cin>>5 int n= (int) s. size(); Pernute permute; permute (stor, 0, n-1); netum O;

```
(b) # include Liostreams
    ft include < storing>
    using namespace std;
   int main () S
   3d: function covoid (string, int, int) > porumute;
   pounute = (s pounute) (string s, int l, int r) of
                   if (25=37) &
                       Cout <<s < end)
                   so return;
               for (int ind; exic= or; i++) of
                  Swap (SCLJ, SCiJ);
                  parmute (5, 2+1, 97);
                  swap [s(l), s(i));
   cout (2" Enter storing";
   String S;
           On >>5)
     int n= (int) s.size();
    permute(5,0,n-1);
    o mentar
```