

Lampiran 1 Kombinasi Urutan Penjadwalan dengan EDD

1. Urutan 3-1-2-4-7-9-8-5-6

- Proses Potong

Pesanan	Mesin	Mulai	Waktu/Pcs(m)	Pesanan	Selesai
Sadariah	1	0	8	35	280
Potongan	2	0	15	50	750
Terusan	3	0	8	60	480
Seruni	1	280	8	50	680
Bunga	3	480	8	20	640
Kebaya	3	640	5	15	715
Koko	1	680	10	20	880
Tersanjung	3	715	8	100	1515
Melati	2	750	8	150	1950

- Proses Bordir

Pemilihan Mesin	Kepala	Mulai	Waktu/Proses(m)	Pesanan	Selesai
Sadariah	12	96	900	35	2796
	15	120	900	35	2820
	20	160	900	35	1960
Potongan	12	180	600	50	3180
	15	225	600	50	2625
	20	1960	600	50	3760
Terusan	12	96	720	60	3696
	15	2625	720	60	5505
	20	1960	720	60	4120
Seruni	12	376	780	50	4276
	15	2625	780	50	5745
	20	1960	780	50	4300
Bunga	12	576	600	20	1776
	15	2625	600	20	3225
	20	1960	600	20	2560
Kebaya	12	1776	360	15	2496
	15	2625	360	15	3345
	20	1960	360	15	2320
Koko	12	1776	480	20	2736
	15	2625	480	20	3585
	20	2320	480	20	2800
Tersanjung	12	2736	840	100	10296
	15	2625	840	100	8505
	20	2320	840	100	6520
Melati	12	2380	600	150	10180
	15	2625	600	150	8625
	20	6520	600	150	11320

Pesanan	Mesin	Mulai	Waktu/Pcs(m)	Pesanan	Selesai
Sadariah	Kpl20	160	900	35	1960
Potongan	Kpl15	225	600	50	2625
Terusan	Kpl12	96	720	60	3696
Seruni	Kpl12	376	780	50	4276
Bunga	Kpl12	576	600	20	1776
Kebaya	Kpl20	1960	360	15	2320
Koko	Kpl12	1776	480	20	2736
Tersanjung	Kpl20	2320	840	100	6520
Melati	Kpl15	2625	600	150	8625

- Proses Jahit

Pesanan	Mesin	Mulai	Waktu/Pcs(m)	Pesanan	Selesai
Sadariah	1	1060	15	35	2185
Potongan	2	825	30	50	2775
Terusan	3	816	15	60	3876
Seruni	4	1156	15	50	4306
Bunga	5	1176	15	20	1896
Kebaya	6	2320	10	15	2470
Koko	7	2256	20	20	2896
Tersanjung	8	3160	15	100	6820
Melati	9	3225	15	150	8850

- Proses Obras

Pesanan	Mesin	Mulai	Waktu/Pcs(m)	Pesanan	Selesai
Sadariah	1	1075	5	35	2260
Potongan	2	855	10	50	2825
Terusan	3	831	5	60	3936
Seruni	4	1171	5	50	4316
Bunga	5	1191	5	20	1936
Kebaya	1	2330	5	15	2545
Koko	5	2276	7	20	3036
Tersanjung	2	3175	5	100	6860
Melati	1	3240	5	150	8925

2. Urutan 3-1-4-2-9-7-8-5-6

• Proses Potong

Proses Potong	Mesin	Mulai	Waktu/Pcs(Min)	Pesanan	Selesai
Sadariah	1	0	8	35	280
Potongan	2	0	15	50	750
Seruni	3	0	8	50	400
Terusan	1	280	8	60	760
Kebaya	3	400	5	15	475
Bunga	3	475	8	20	635
Koko	3	635	10	20	835
Tersanjung	2	750	8	100	1550
Melati	1	760	8	150	1960

• Proses Bordir

Pemilihan Mesin	Kepala	Mulai	Waktu/Proses(m)	Pesanan	Selesai
Sadariah	12	96	900	35	2796
	15	120	900	35	2820
	20	160	900	35	1960
Potongan	12	180	600	50	3180
	15	225	600	50	2625
	20	1960	600	50	3760
Seruni	12	96	780	50	3996
	15	2625	780	50	5745
	20	1960	780	50	4300
Terusan	12	376	720	60	3976
	15	2625	720	60	5505
	20	1960	720	60	4120
Kebaya	12	460	360	15	1180
	15	2625	360	15	2985
	20	1960	360	15	2320
Bunga	12	1180	600	20	2380
	15	2625	600	20	3825
	20	1960	600	20	2560
Koko	12	2380	480	20	3340
	15	2625	480	20	3585
	20	1960	480	20	2440
Tersanjung	12	2380	840	100	9940
	15	2625	840	100	8505
	20	2440	840	100	6640
Melati	12	2380	600	150	10180
	15	2625	600	150	8625
	20	6640	600	150	11440

Proses Bordir	Mesin	Mulai	Waktu/Pcs(m)	Pesanan	Selesai
Sadariah	Kpl20	160	900	35	1960
Potongan	Kpl15	225	600	50	2625
Seruni	Kpl12	96	780	50	3996
Terusan	Kpl12	376	720	60	3976
Kebaya	Kpl12	460	360	15	1180
Bunga	Kpl12	1180	600	20	2380
Koko	Kpl20	1960	480	20	2440
Tersanjung	Kpl20	2440	840	100	6640
Melati	Kpl15	2625	600	150	8625

- Proses Jahit

Proses Jahit	Mesin	Mulai	Waktu/Pcs(m)	Pesanan	Selesai
Sadariah	1	1060	15	35	2185
Potongan	2	825	30	50	2775
Seruni	3	876	15	50	4026
Terusan	4	1096	15	60	4156
Kebaya	5	820	10	15	1210
Bunga	6	1780	15	20	2500
Koko	7	2440	20	20	2840
Tersanjung	8	3280	15	100	6940
Melati	9	3225	15	150	8850

- Proses Obras

Proses Obras	Mesin	Mulai	Waktu/Pcs(m)	Pesanan	Selesai
Sadariah	1	1075	5	35	2260
Potongan	2	855	10	50	2825
Seruni	3	891	5	50	4036
Terusan	4	1111	7	60	4240
Kebaya	5	830	5	15	1225
Bunga	5	1795	5	20	2540
Koko	1	2460	7	20	2980
Tersanjung	2	3295	5	100	7040
Melati	5	3240	5	150	8925

3. Urutan 3-1-4-2-7-9-8-5-6

• Proses Potong

Pesanan	Job	Mesin	Mulai	Waktu/Pcs(m)	Pesanan	Selesai
Sadariah	3	1	0	8	35	280
Potongan	1	2	0	15	50	750
Seruni	4	3	0	8	50	400
Terusan	2	1	280	8	60	760
Bunga	7	3	400	8	20	560
Kebaya	9	3	560	5	15	635
Koko	8	3	635	10	20	835
Tersanjung	5	2	750	8	100	1550
Melati	6	1	760	8	150	1960

• Proses Bordir

Pemilihan Mesin	Kepala	Mulai	Waktu/Proses(m)	Pesanan	Selesai
Sadariah	12	96	900	35	2796
	15	120	900	35	2820
	20	160	900	35	1960
Potongan	12	180	600	50	3180
	15	225	600	50	2625
	20	1960	600	50	3760
Seruni	12	96	780	50	3996
	15	2625	780	50	5745
	20	1960	780	50	4300
Terusan	12	376	720	60	3976
	15	2625	720	60	5505
	20	1960	720	60	4120
Bunga	12	496	600	20	1696
	15	2625	600	20	3825
	20	1960	600	20	2560
Kebaya	12	1696	360	15	2416
	15	2625	360	15	3345
	20	1960	360	15	2320
Koko	12	1696	480	20	2656
	15	2625	480	20	3585
	20	2320	480	20	2800
Tersanjung	12	2656	840	100	10216
	15	2625	840	100	8505
	20	2320	840	100	6520
Melati	12	2656	600	150	10456
	15	2625	600	150	8625
	20	6520	600	150	11320

Pesanan	Mesin	Mulai	Waktu/Pcs(m)	Pesanan	Selesai
Sadariah	Kpl20	160	900	35	1960
Potongan	Kpl15	225	600	50	2625
Seruni	Kpl12	96	780	50	3996
Terusan	Kpl12	376	720	60	3976
Bunga	Kpl12	496	600	20	1696
Kebaya	Kpl20	1960	360	15	2320
Koko	Kpl12	1696	480	20	2656
Tersanjung	Kpl20	2320	840	100	6520
Melati	Kpl15	2625	600	150	8625

- Proses Jahit

Pesanan	Mesin	Mulai	Waktu/Pcs(m)	Pesanan	Selesai
Sadariah	1	1060	15	35	2185
Potongan	2	825	30	50	2775
Seruni	3	876	15	50	4026
Terusan	4	1096	15	60	4156
Bunga	5	1096	15	20	1816
Kebaya	6	2320	10	15	2470
Koko	7	2176	20	20	2816
Tersanjung	8	3160	15	100	6820
Melati	9	3225	15	150	8850

- Proses Obras

Pesanan	Mesin	Mulai	Waktu/Pcs(m)	Pesanan	Selesai
Sadariah	1	1075	5	35	2260
Potongan	2	855	10	50	2825
Seruni	3	891	5	50	4036
Terusan	4	1111	5	60	4216
Bunga	5	1111	5	20	1856
Kebaya	1	2330	5	15	2545
Koko	5	2196	7	20	2872
Tersanjung	2	3175	5	100	6920
Melati	1	3240	5	150	8925

Lampiran 2 Pengembangan Penjadwalan

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populasi=7; %banyaknya urutan yang diinginkan
%urutan job =
    %1 = Sadariah,      A
    %2 = Potongan,     B
    %3 = Terusan,      C
    %4 = Seruni,        D
    %5 = Kebaya,        E
    %6 = Bunga,         F
    %7 = Koko,          G
    %8 = Tersanjung,   H
    %9 = Melati,        I
%job      = urutan waktu proses mesin potong
%b_job    = urutan waktu proses mesin bordir
%j_job    = urutan waktu proses mesin jahit
%o_job    = urutan waktu proses mesin obras
%hari     = urutan tenggat waktu per hari 7 jam kerja
%q        = kuantitas untuk setiap pesanan
% ganti 'q' dan 'hari' untuk perhitungan setiap bulannya

%% waktu
%Proses Potong
job_p=[8 15 8 8 5 8 10 8 8];
%Proses Bordir
job_b=[900 600 720 780 360 600 480 840 600];
%Proses Jahit
job_j=[15 30 15 15 10 15 20 15 15];
%Proses Obras
job_o=[5 10 5 5 5 5 7 5 5];
%deadline
hari=[7 8 10 10 11 11 12 16 22];
dead=hari*7*60;

%% Quantitas
q=[35 50 60 50 15 20 20 100 150];

urut = repelem(1:9,q(1:9)); %urutan berdasarkan perhitungan EDD

A=repelem(1,q(1));
B=repelem(2,q(2));
C=repelem(3,q(3));
D=repelem(4,q(4));
E=repelem(5,q(5));
F=repelem(6,q(6));
G=repelem(7,q(7));
H=repelem(8,q(8));
I=repelem(9,q(9));

for j=1:(populasi-6)
    akhir=repelem(randperm(9),q(1:9));
    urutan(j+1,:)=akhir;
end

urutan(1,:)=urut;
urutan(2,:)=[];
urutan(3,:)= [A, B, C, D, F, E, G, H, I]; %EDD 2
urutan(4,:)= [A, B, D, C, F, E, G, H, I]; %EDD 3
urutan(5,:)= [A, B, D, C, E, F, G, H, I]; %EDD 4
urutan(6,:)= [B, C, A, D, H, I, F, G, E]; %FCFS
urutan(7,:)=[];

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terpotong(1:9,1:populasi)=0;
terpotong_sisa(1:9,1:populasi)=0;
terbordir(1:9,1:populasi)=0;
terbordir_og(1:9,1:populasi)=0;
terbordir_sisa(1:9,1:populasi)=0;
terjahit(1:9,1:populasi)=0;
terjahit_sisa(1:9,1:populasi)=0;
terjahit_og(1:9,1:populasi)=0;
terobras(1:9,1:populasi)=0;
terobras_og(1:9,1:populasi)=0;
tb(1:5,1:populasi)=0;
tj(1:9,1:populasi)=0;
to(1:5,1:populasi)=0;
selesai=0;
selesai_perjob(1:9,1:populasi)=0;

mesin_b_penuh(1:5,1:populasi)=0;
mesin_b_sisa(1:5,1:populasi)=0;

berubah=0;
x=1;
score(1:populasi)=0;
sukses(1:9,1:populasi)=0;

%% Proses
for n=1:populasi
    t=1;
    %% Mesin
    %%Mesin Potong
    mesin_p(1:3)=0;
    %%Mesin Bordir
    mesin_b(1:5)=0;
    q_mesin_b(1:3)=12;
    q_mesin_b(4)=15;
    q_mesin_b(5)=20;
    %%Mesin Jahit
    mesin_j(1:9)=0;
    %%mesin Obras
    mesin_o(1:5)=0;
    m=1;
    while t<10000
    %%waktu
        menit(t)=t;
        for a=1:5
            if mesin_b(a)~=0
                tb(a,n)=tb(a,n)+1;
            end
        end
        for jahit=1:9
            if mesin_j(jahit)~=0
                tj(jahit,n)=tj(jahit,n)+1;
            end
        end
        for obras=1:5
            if mesin_o(obras)~=0
                to(obras,n)=to(obras,n)+1;
            end
        end
    end
end

%% Proses Potong

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%tentukan produk yang dikerjakan mesin potong
for z=1:3
    if mesin_p(z)==0 && m<=length(urut)
        mesin_p(z)=urutan(n,m);
        if m<=length(urut)
            m=m+1;
        end
    end
end
for p=1:9
    if mesin_p(z)==(p) && mod(t,job_p(p))==0
        terpotong(p,n)=terpotong(p,n)+1;
        terpotong_sisa(p,n)=terpotong_sisa(p,n)+1;
        mesin_p(z)=0;
    end
end
end

%% Proses Bordir
for c=1:9
    for b=1:5
        if mesin_b(b)==0 && terpotong_sisa(c,n)>=q_mesin_b(b) &&
(terpotong_sisa(c,n)<=0)~=1
            mesin_b(b)=c;
            terpotong_sisa(c,n)=terpotong_sisa(c,n)-q_mesin_b(b);
            terbordir_og(c,n)=terbordir_og(c,n)+terbordir(c,n)+q_mesin_b(b);
            mesin_b_penuh(b)=c;
        else
            if mesin_b(b)==0 && terbordir(c,n)<q(c) && (q(c)-
            terbordir_og(c,n))<q_mesin_b(b) && terpotong_sisa(c,n)>=(q(c)-
            terbordir_og(c,n))
                mesin_b(b)=c;
                terpotong_sisa(c,n)=0;
                mesin_b_sisa(b)=c;
            end
        end
    end
end
for d=1:5
    if mesin_b(d)~=0 && mesin_b_penuh(d)==(mesin_b(d))
        if tb(d,n)==job_b(mesin_b(d))

            terbordir(mesin_b(d),n)=terbordir(mesin_b(d),n)+q_mesin_b(d);

            terbordir_sisa(mesin_b(d),n)=terbordir_sisa(mesin_b(d),n)+q_mesin_b(d);
            mesin_b(d)=0;
            tb(d,n)=0;
            mesin_b_penuh(d)=0;
        end
    else
        if mesin_b(d)~=0 && tb(d,n)==job_b(mesin_b(d)) &&
mesin_b_sisa(d)==(mesin_b(d))

            terbordir_sisa(mesin_b(d),n)=terbordir_sisa(mesin_b(d),n)+((q(mesin_b(d))
            )-(terbordir(mesin_b(d),n)));

            terbordir(mesin_b(d),n)=terbordir(mesin_b(d),n)+(q(mesin_b(d))-
            terbordir(mesin_b(d),n));
            mesin_b(d)=0;
            tb(d,n)=0;
            mesin_b_sisa(d)=0;
        end
    end
end

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        end
    end
end

%% Proses Jahit
for e=1:9
    for f=1:9
        if mesin_j(e)==0 && terbordir(f,n)>0 &&
terjahit(f,n)<q(f) && terjahit_og(f,n)<q(f) &&
(terbordir_sisa(f,n)<=0)~=1
            mesin_j(e)=f;
            terjahit_og(f,n)=terjahit_og(f,n)+1;
            terbordir_sisa(f,n)=terbordir_sisa(f,n)-1;
        end
    end
end
for g=1:9
    if mesin_j(g)~=0 && tj(g,n)==job_j(mesin_j(g))
        terjahit(mesin_j(g),n)=terjahit(mesin_j(g),n)+1;
terjahit_sisa(mesin_j(g),n)=terjahit_sisa(mesin_j(g),n)+1;
        tj(g,n)=0;
        mesin_j(g)=0;
    end
end

%% Proses Obras
for h=1:5
    for i=1:9
        if mesin_o(h)==0 && terjahit(i,n)>0 && terobras(i,n)<q(i)
&& terobras_og(i,n)<q(i) && (terjahit_sisa(i,n)<=0)~=1
            mesin_o(h)=i;
            terobras_og(i,n)=terobras_og(i,n)+1;
            terjahit_sisa(i,n)=terjahit_sisa(i,n)-1;
        end
    end
end
for j=1:5
    if mesin_o(j)~=0 && to(j,n)==job_o(mesin_o(j))
        terobras(mesin_o(j),n)=terobras(mesin_o(j),n)+1;
        to(j,n)=0;
        mesin_o(j)=0;
    end
end

%% Catat Waktu
for s=1:9
    if terobras(s,n)==q(s) && selesai_perjob(s,n)==0
        selesai_perjob(s,n)=t;
    end
end

if selesai==0 && sum(terobras(:,n))==length(urutan(:,n))
    selesai=t;
end
t=t+1;
end

%% Scoring
for banyakjob=1:9

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```
        if selesai_perjob(banyakjob,n)<=dead(banyakjob) &&
selesai_perjob(banyakjob,n)>(0.9*dead(banyakjob))
            score(n)=score(n)+1;
            sukses(banyakjob,n)=sukses(banyakjob,n)+1;
        elseif selesai_perjob(banyakjob,n)<=(0.9*dead(banyakjob)) &&
selesai_perjob(banyakjob,n)>=(0.0001*dead(banyakjob))

score(n)=score(n)+1+(dead(banyakjob)/10)/selesai_perjob(banyakjob,n);
            sukses(banyakjob,n)=sukses(banyakjob,n)+1;
        end
    end
    if sum(sukses(:,n))==9
        score(n)=score(n)+10;
    end
end
ScoreMax=max(score)
UrutanScoreMax=find(score==ScoreMax)
```


Lampiran 4 Alokasi Mesin

1. Mesin Potong

Menit	Mesin Potong 1	Mesin Potong 2	Mesin Potong 3
1	1	1	1
88	0	0	0
89	1	1	2
96	0	0	2
97	2	2	2
336	2	0	2
337	2	3	2
343	2	3	0
345	2	3	3
351	0	3	3
488	3	3	3
496	3	0	3
503	3	4	0
511	0	4	4
624	4	4	4
632	4	0	4
639	0	5	0
680	5	5	5
687	5	5	0
688	5	0	6
695	0	6	6
705	6	6	6
712	6	6	0
713	6	0	7
720	0	7	7
760	7	7	7
780	0	7	7
782	8	7	0
783	8	0	8
771	8	8	8
1046	8	8	0
1047	8	0	9
1052	0	9	9
1446	9	9	0
1447	9	0	0
1452	0	0	0

2. Mesin Bordir

Menit	Mesin Bordir 1	Mesin Bordir 2	Mesin Bordir 3	Mesin Bordir 4	Mesin Bordir 5
1	0	0	0	0	0
32	1	0	0	0	0
64	1	1	0	0	0
96	1	1	1	0	0
165	1	1	1	2	0
270	1	1	1	2	2
932	0	1	1	2	2
933	2	1	1	2	2
964	2	0	1	2	2
965	2	2	1	2	2
996	2	2	0	2	2
997	2	2	2	2	2
1366	2	2	2	0	2
1367	2	2	2	3	2
1471	2	2	2	3	0
1472	2	2	2	3	3
1532	0	2	2	3	3
1533	3	2	2	3	3
1564	3	0	2	3	3
1565	3	3	2	3	3
1596	3	3	0	3	3
1596	3	3	3	3	3
2085	3	3	3	0	3
2086	3	3	3	4	3
2190	3	3	3	4	0
2191	3	3	3	4	4
2252	0	3	3	4	4
2253	4	3	3	4	4
2284	4	0	3	4	4
2285	4	4	3	4	4
2316	4	4	0	4	4
2317	4	4	5	4	4
2865	4	4	5	0	4
2866	4	4	5	5	4
2916	4	4	0	5	4
2917	4	4	6	5	4
2970	4	4	6	5	0
2971	4	4	6	5	6
3032	0	4	6	5	6
3033	7	4	6	5	6
3064	7	0	6	5	6
3065	7	7	6	5	6
3276	7	7	0	5	6
3277	7	7	8	5	6
3330	7	7	8	5	0

Menit	MJ1	MJ2	MJ3	MJ4	MJ5	MJ6	MJ7	MJ8	MJ9
1427	0	0	0	0	0	0	0	0	0
2087	3	3	3	3	3	3	3	3	3
2223	0	0	0	0	0	0	0	0	0
2224	3	3	0	0	0	0	0	0	0
2244	0	0	0	0	0	0	0	0	0
2254	3	3	3	3	3	3	3	3	3
2269	0	0	0	0	0	0	0	0	0
2270	3	3	3	0	0	0	0	0	0
2285	0	0	0	0	0	0	0	0	0
2286	3	3	3	3	3	3	3	3	3
2301	0	0	0	0	0	0	0	0	0
2302	3	3	3	0	0	0	0	0	0
2317	0	0	0	0	0	0	0	0	0
2318	3	0	0	0	0	0	0	0	0
2333	0	0	0	0	0	0	0	0	0
2679	5	5	5	5	5	5	5	5	5
2689	0	0	0	0	0	0	0	0	0
2690	5	5	5	0	0	0	0	0	0
2700	0	0	0	0	0	0	0	0	0
2868	4	4	4	4	4	4	4	4	4
2883	0	0	0	0	0	0	0	0	0
2884	4	4	4	4	4	4	0	0	0
2899	0	0	0	0	0	0	0	0	0
2973	4	4	4	4	4	4	4	4	4
3004	0	0	0	0	0	0	0	0	0
3005	4	4	0	0	0	0	0	0	0
3020	0	0	0	0	0	0	0	0	0
3035	4	4	4	4	4	4	4	4	4
3050	0	0	0	0	0	0	0	0	0
3051	4	4	4	5	5	5	0	0	0
3061	4	4	4	0	0	0	0	0	0
3062	4	4	4	0	0	0	0	0	0
3066	0	0	0	0	0	0	0	0	0
3067	4	4	4	0	0	0	0	0	0
3082	0	0	0	0	0	0	0	0	0
3469	6	6	6	6	6	6	6	6	6
3484	0	0	0	0	0	0	0	0	0
3485	6	6	6	6	6	6	0	0	0
3500	0	0	0	0	0	0	0	0	0
3505	0	0	0	0	0	0	0	0	0
3516	7	7	7	7	7	7	7	7	7
3557	0	0	0	0	0	0	0	0	0
3558	7	7	0	0	0	0	0	0	0
3564	7	7	0	0	0	0	0	0	0
3574	7	7	6	6	6	6	6	0	0
3578	0	0	6	6	6	6	6	0	0

Menit	MJ1	MJ2	MJ3	MJ4	MJ5	MJ6	MJ7	MJ8	MJ9
3585	0	0	6	6	6	6	6	0	0
3589	0	0	0	0	0	0	0	0	0
3908	8	8	8	8	8	8	8	8	8
4388	0	0	0	0	0	0	0	0	0
4404	0	0	0	0	0	0	0	0	0
4415	8	8	8	8	8	8	8	8	8
5182	0	0	0	0	0	0	0	0	0
5198	8	8	0	0	0	0	0	0	0
5213	0	0	0	0	0	0	0	0	0
5799	9	9	9	9	9	9	9	9	9
5830	0	0	0	0	0	0	0	0	0
5831	9	9	9	9	9	9	0	0	0
5846	0	0	0	0	0	0	0	0	0
5857	9	9	9	9	9	9	9	9	9
5888	0	0	0	0	0	0	0	0	0
5889	9	9	0	0	0	0	0	0	0
5904	0	0	0	0	0	0	0	0	0
6191	9	9	9	9	9	9	9	9	9
6431	0	0	0	0	0	0	0	0	0
6432	9	9	9	9	9	9	0	0	0
6447	0	0	0	0	0	0	0	0	0
6458	9	9	9	9	9	9	9	9	9
6489	0	0	0	0	0	0	0	0	0
6490	9	9	0	0	0	0	0	0	0
6505	0	0	0	0	0	0	0	0	0
6593	9	9	9	9	9	9	9	9	9
6608	0	0	0	0	0	0	0	0	0
6609	9	9	9	9	9	9	0	0	0
6624	0	0	0	0	0	0	0	0	0
6792	9	9	9	9	9	9	9	9	9
6807	0	0	0	0	0	0	0	0	0
6808	9	9	9	0	0	0	0	0	0
6823	0	0	0	0	0	0	0	0	0
7001	9	9	9	9	9	9	9	9	9
7032	0	0	0	0	0	0	0	0	0
7033	9	9	9	9	9	0	0	0	0
7048	0	0	0	0	0	0	0	0	0

4. Mesin Obras

Menit	Mesin Obras 1	Mesin Obras 2	Mesin Obras 3	Mesin Obras 4	Mesin Obras 5
1	0	0	0	0	0
795	2	2	2	2	2
805	0	0	0	0	0
806	2	2	2	2	0
825	0	0	0	0	0

Menit	Mesin Obras 1	Mesin Obras 2	Mesin Obras 3	Mesin Obras 4	Mesin Obras 5
826	2	2	2	2	2
836	0	0	0	0	0
837	2	0	0	0	0
847	0	0	0	0	0
897	0	0	0	0	0
900	2	2	2	2	2
910	0	0	0	0	0
911	2	2	2	2	0
921	0	0	0	0	0
929	0	0	0	0	0
931	2	2	2	2	2
941	0	0	0	0	0
942	2	2	2	2	0
947	2	2	2	2	1
952	0	0	0	0	0
953	1	1	1	1	1
958	0	0	0	0	0
959	1	1	1	0	0
961	1	1	1	0	0
963	1	1	1	1	1
964	0	0	0	1	1
965	1	0	0	1	1
968	1	0	0	0	0
970	0	0	0	0	0
977	0	0	0	0	0
978	2	2	0	0	0
979	2	2	1	1	1
984	2	2	0	0	0
985	2	2	1	1	1
988	0	0	1	1	1
989	1	0	1	1	1
990	1	0	0	0	0
994	0	1	1	0	0
995	1	1	1	1	1
999	1	0	0	1	1
1000	0	0	0	0	0
1011	1	1	1	1	1
1016	0	0	0	0	0
1017	1	1	1	1	0
1022	0	0	0	0	0
1027	1	1	0	0	0
1032	0	0	0	0	0
1396	2	2	2	2	2
1406	0	0	0	0	0
1407	2	2	2	2	0
1417	0	0	0	0	0

Menit	Mesin Obras 1	Mesin Obras 2	Mesin Obras 3	Mesin Obras 4	Mesin Obras 5
1427	2	2	2	2	2
1437	0	0	0	0	0
1438	2	0	0	0	0
1448	0	0	0	0	0
2102	3	3	3	3	3
2107	0	0	0	0	0
2108	3	3	3	3	0
2113	0	0	0	0	0
2118	3	3	3	3	3
2123	0	0	0	0	0
2124	3	0	0	0	0
2129	0	0	0	0	0
2207	3	3	3	3	3
2212	0	0	0	0	0
2213	3	3	3	3	0
2218	0	0	0	0	0
2223	3	3	3	3	3
2228	0	0	0	0	0
2229	3	3	3	3	0
2234	0	0	0	0	0
2239	3	3	0	0	0
2244	0	0	0	0	0
2269	3	3	3	3	3
2274	0	0	0	0	0
2275	3	3	3	3	0
2280	0	0	0	0	0
2285	3	3	3	0	0
2290	0	0	0	0	0
2302	3	3	3	3	3
2306	0	0	0	0	0
2307	3	3	3	3	0
2312	0	0	0	0	0
2317	3	3	3	0	0
2322	0	0	0	0	0
2333	3	0	0	0	0
2338	0	0	0	0	0
2883	4	4	4	4	4
2888	0	0	0	0	0
2889	4	4	4	4	0
2894	0	0	0	0	0
2899	4	4	4	4	4
2904	0	0	0	0	0
2905	4	0	0	0	0
2910	0	0	0	0	0
2934	5	5	5	5	5
2939	0	0	0	0	0

Menit	Mesin Obras 1	Mesin Obras 2	Mesin Obras 3	Mesin Obras 4	Mesin Obras 5
2940	5	5	5	5	0
2945	0	0	0	0	0
2950	5	5	5	0	0
2955	0	0	0	0	0
2988	4	4	4	4	4
2993	0	0	0	0	0
2994	4	4	4	4	0
2999	0	0	0	0	0
3004	4	4	4	4	4
3009	0	0	0	0	0
3010	4	4	4	4	0
3015	0	0	0	0	0
3020	4	4	0	0	0
3025	0	0	0	0	0
3050	4	4	4	4	4
3055	0	0	0	0	0
3056	4	4	4	4	0
3061	0	0	0	0	0
3066	4	4	4	0	0
3071	0	0	0	0	0
3082	4	4	4	0	0
3087	0	0	0	0	0
3290	6	6	6	6	6
3295	0	0	0	0	0
3296	6	6	6	6	0
3301	0	0	0	0	6
3302	6	6	0	0	6
3306	6	6	0	0	0
3307	0	0	0	0	0
3344	6	6	6	0	0
3349	0	0	0	0	0
3484	5	5	5	5	5
3489	0	0	0	0	0
3490	5	5	5	0	0
3495	0	0	0	0	0
3536	7	7	7	7	7
3543	0	0	0	0	0
3544	7	7	7	7	0
3551	0	0	0	0	0
3557	7	7	7	0	0
3564	0	0	0	0	0
3568	7	7	7	7	7
3575	0	0	0	0	0
3576	7	0	0	0	0
3578	7	7	7	0	0
3583	0	7	7	0	0

Menit	Mesin Obras 1	Mesin Obras 2	Mesin Obras 3	Mesin Obras 4	Mesin Obras 5
3585	0	0	0	0	0
4136	8	8	8	8	8
4141	0	0	0	0	0
4142	8	8	8	8	0
4147	0	0	0	0	0
4152	8	8	8	0	0
4157	0	0	0	0	0
4190	8	8	8	8	8
4195	0	0	0	0	0
4196	8	8	8	8	0
4201	0	0	0	0	0
4206	8	8	8	8	8
4211	0	0	0	0	0
4212	8	8	8	8	0
4217	0	0	0	0	0
4222	8	8	0	0	0
4227	0	0	0	0	0
4311	0	0	0	0	0
4325	8	8	8	8	8
4330	0	0	0	0	0
4331	8	8	8	8	0
4336	0	0	0	0	0
4341	8	8	8	8	8
4346	0	0	0	0	0
4347	8	0	0	0	0
4352	0	0	0	0	0
4372	8	8	8	8	8
4377	0	0	0	0	0
4378	8	8	8	8	0
4383	0	0	0	0	0
4388	8	8	8	0	0
4393	0	0	0	0	0
4404	8	8	8	8	8
4409	0	0	0	0	0
4410	8	8	8	8	0
4415	0	0	0	0	0
4420	8	8	8	0	0
4425	0	0	0	0	0
4977	8	8	8	8	8
4982	0	0	0	0	0
4983	8	8	8	8	0
4988	0	0	0	0	0
4993	8	8	8	0	0
4998	0	0	0	0	0
5031	8	8	8	8	8
5036	0	0	0	0	0

Menit	Mesin Obras 1	Mesin Obras 2	Mesin Obras 3	Mesin Obras 4	Mesin Obras 5
5037	8	8	8	8	0
5042	0	0	0	0	0
5047	8	8	8	8	8
5052	0	0	0	0	0
5053	8	8	8	0	0
5058	0	0	0	0	0
5632	9	9	9	9	9
5637	0	0	0	0	0
5638	9	9	9	9	0
5643	0	0	0	0	0
5648	9	9	9	9	9
5653	0	0	0	0	0
5654	9	9	9	9	0
5659	0	0	0	0	0
5664	9	9	0	0	0
5669	0	0	0	0	0
5767	9	9	9	9	9
5772	0	0	0	0	0
5773	9	9	9	9	0
5778	0	0	0	0	0
5783	9	9	9	9	9
5788	0	0	0	0	0
5789	9	0	0	0	0
5794	0	0	0	0	0
5814	9	9	9	9	9
5819	0	0	0	0	0
5820	9	9	9	9	0
5825	0	0	0	0	0
5830	9	9	9	0	0
5835	0	0	0	0	0
5846	9	9	9	9	9
5851	0	0	0	0	0
5852	9	9	9	9	0
5857	0	0	0	0	0
5862	9	9	9	0	0
5867	0	0	0	0	0
6233	9	9	9	9	9
6238	0	0	0	0	0
6239	9	9	9	9	0
6244	0	0	0	0	0
6249	9	9	9	9	9
6254	0	0	0	0	0
6255	9	9	9	9	0
6260	0	0	0	0	0
6265	9	9	0	0	0
6270	0	0	0	0	0

Menit	Mesin Obras 1	Mesin Obras 2	Mesin Obras 3	Mesin Obras 4	Mesin Obras 5
6368	9	9	9	9	9
6373	0	0	0	0	0
6374	9	9	9	9	0
6379	0	0	0	0	0
6384	9	9	9	9	9
6389	0	0	0	0	0
6390	9	0	0	0	0
6395	0	0	0	0	0
6415	9	9	9	9	9
6420	0	0	0	0	0
6421	9	9	9	9	0
6426	0	0	0	0	0
6431	9	9	9	9	9
6436	0	0	0	0	0
6437	9	9	9	9	0
6442	0	0	0	0	0
6447	9	9	9	9	9
6452	0	0	0	0	0
6453	9	9	9	9	0
6458	0	0	0	0	0
6463	9	9	9	9	9
6468	0	0	0	0	0
6469	9	9	9	9	0
6474	0	0	0	0	0
6834	9	9	9	9	9
6839	0	0	0	0	0
6840	9	9	9	9	0
6845	0	0	0	0	0
6850	9	9	9	9	9
6855	0	0	0	0	0
6856	9	9	9	9	0
6861	0	0	0	0	0
6866	9	9	0	0	0
6871	0	0	0	0	0