

Assignment - 12

① write a ^{recursive} function to print first N natural no.

Ans → #include <stdio.h>
void printN(int n);
int main()

{ int x;
printf("Enter x value");
scanf("%d", &x);
printN(x);
return 0;

}

void printN(int n)

{ if(n > 0)

{ print(n-1);

printf("%d", n);

}

}

② write a recursive function to print first N natural number in reverse order.

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

```
void printN(int n);
```

```
int main()
```

```
{ int n;
```

```
printf("Enter n value");
```

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

```
printN(n);
```

```
return 0;
```

```
}
```

```
void printN(int n)
```

```
{ if(n == 0)
```

```
return;
```

```
printf("%d", n);
```

```
printN(n-1);
```

```
}
```

③ write a recursive function to print first n odd natural no.

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

```
void odd (int a, int i, int n);
```

```
int main ( )
```

```
{ int a = 1, i = 0, n;
```

```
printf ("Enter n");
```

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

```
odd (a, i, n);
```

```
return 0;
```

```
}
```

```
void odd (int a, int i, int n)
```

```
{ if (i == n)
```

```
return;
```

```
odd (a+2, i+1, n);
```

```
printf ("%d", a);
```

```
}
```

④ write a recursive function to print first n odd natural no in reverse ~~odd~~ order.

```
#include <stdio.h>
void odd(int a, int i, int n);
int main()
```

```
{ int a=1, i=1, n;
```

```
printf("Enter n value");
```

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

```
odd(a, i, n);
```

```
return 0;
```

```
}
void odd(int a, int i, int n)
```

```
{ if(i==n)
```

```
return;
```

```
printf("%d", a);
```

```
odd(a+2, i+1, n);
```

```
}
```

Q) write a recursive function to print first N even natural no in reverse order.

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

```
void even (int a, int i, int n);
```

```
int main()
```

```
{ int a = 0; i = 1; n;
```

```
printf("Enter a value");
```

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

```
even(a, i, n);
```

```
return 0;
```

```
} void even (int a, int i, int n)
```

```
{ if(i == n)
```

```
return;
```

```
printf("%d", a);
```

```
odd(a+2, i+1, n);
```

```
}
```

① write a recursive function to print first N even natural no.

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

```
void even (int a, int i, int n);
```

```
int main ()
```

```
{ int a = 0; int i = 1; int n;
```

```
printf ("Enter n value");
```

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

```
even(a, i, n);
```

```
return 0;
```

```
}
```

```
void even (int a, int i, int n)
```

```
{ if (i == n)
```

```
return
```

```
even(a+2, i+1, n);
```

```
printf ("%d", a);
```

```
}
```

⑦ write a recursive function to print square of first n natural no.

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

```
void printn(int n)
```

```
int main()
```

```
{ int n;
```

```
printf("enter n value");
```

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

```
printn(n);
```

```
return 0;
```

```
}  
void printn(int n)
```

```
{ if(n == 0)
```

```
return;
```

```
printn(n-1)
```

```
printf("%d", n*n);
```

```
}
```

⑧ write a recursive function to print reverse of a given no.

Ans →
#include <stdio.h>
void rev(int n);
int main()

{ int n;
printf("Enter n value");
scanf("%d", &n);
rev(n);
return 0;

}

void rev(int n)

{ if(n == 0)
return;

printf("%d", n%10);

rev(n/10);

}

① write a recursive function to print binary of a given decimal no.

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

```
void int main (int n);  
d to b
```

```
int main ( )
```

```
{ int n;
```

```
printf ("enter n value");
```

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

```
dto b(n);
```

```
return 0;
```

```
}  
void dto b (int n)
```

```
{ if (n > 0)
```

```
{ dto b (n/2);
```

```
printf ("%d", n%2);
```

```
}
```

```
}
```

⑩ write a recursive function to print octal of a given decimal no.

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

```
void dtoo(int n)
```

```
int main()
```

```
{ int n;
```

```
printf("Enter n");
```

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

```
dtoo(n);
```

```
return 0;
```

```
}
```

```
void dtoo(int n)
```

```
{ if(n > 0)
```

```
{ dtoo(n/8);
```

```
printf("%d", n%8);
```

```
}
```

```
}
```